

Albert Durer Revived:

O R,
A BOOK OF
Dravving, Limning, Washing,
Or Colouring of
MAPS and PRINTS:

And the Art of *PAINTING*, with the Names
and Mixtures of Colours used by the Picture-Drawers.

With Directions how to Paint Pictures upon Glasse.

O R,
The Young-mans Time well Spent.

In which he hath the Ground-work to make him fit for doing
any thing by Hand, when he is able to Draw well.

By the Use of this Work, you may Draw all Parts of a Man, Legs, Arms, Hands,
and Feet, severally and together. And Directions for Birds, Beasts, Land-
skips, Ships, and the like.

Moreover, Grounds to lay Silver or Gold upon; and how Silver or Gold shall
be laid or Limned upon Size, and the way to temper Gold and Silver, and
other Mettals, and divers kinds of Colours, to Write, or to Limn withal,
upon Vellum, Parchment, or Paper, and how to lay them upon the Work
which you intend to make; and how to Varnish it when you have done.

How also to Diaper and Shadow things, and to highten them, to stand off: to
Deepen them, and make them Glister.

IN THIS BOOK,

You have the necessary Instruments for Drawing, and the use of them; and
how to make Artificial Pastiles to draw withal. And also Directions, how
to draw with *Indian Ink*: wherein you have also Mr. *Hollar's* Receipt for
Etching, with Instructions how to use it.

Very Useful for all Handicrafts, and Ingenuous Gentlemen and Youths.

By Hammer and Hand, all Arts do stand.

Infelix qui Pauca Sapit, spernitque Doceri.

LONDON, Printed by H. Hills, Jun. for John Garrett at his Shop as you go up the Stairs of
the Royal Exchange in Cornhill: Where you may have choice of all sorts of large and small
Maps, coloured or uncoloured; variety of *Dutch* and *French* Prints, and Prints done in
Mezzo Tincto; very good *Indian Ink* to Draw withall; and all sorts of the best Copy-books;
and *Cocker's* Tutor to Writing and Arithmetick, being a new and most easie Method, so easie
that the meanest Capacity may understand it at first sight, 1685.

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CHAS. F. BROWN

1902-1903

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Take ye heed
to the
words
of the
Master
of the
School
of
Painting
and
Engraving
in
this
book
of
the
Art
of
Drawing
according
to
the
order
of
Albert
Dürer:
Jean
Cozy
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Men
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Of necessary Instruments for Drawing.

FOR Implements these are the only necessary ones; Pens made of Ravens Quills, because they are best to draw Fair, and shadow fine, and small Charcoals, Black-lead, White-lead, Red-lead, a Feather, and a pair of Compasses.

The use of these Instruments.

FOR your Charcoals, they must be slit into small slender pieces, and then sharpened at the point. You may chuse your Charcoals thus, they are finer grain'd than others, and smooth when they are broken, and soft, and they have a pith in the middle of them, which is the best token to know them by: The use of them is to draw over your Drafts first withall, because if you should draw it false at first, you may easily wipe it out, which you cannot so well do with any other thing.

Your Black-lead is to draw over that again which you drew before in Charcoal, because this will not wipe out with your Hands when you come to draw it with your Pen; and if you shall draw it with your Pen before this, your Charcoal would furry your Pen, that you could not write with it, and besides you cannot so well mend your faults with a Pen as with a Black-lead, for what you do with your Pen, you cannot alter, but wherein you err with your Black-lead, you mend it with your Pen.

The Pen is the Finisher of your Work, with which you must be most exact, knowing it is unalterable, therefore you must be sure your Work is right before you draw it with your Pen.

Black-chalk is to draw on blew Paper with, which is not to be used till you be pretty perfect in drawing.

White-lead is to do the lightest parts of that you draw before with Black-chalk.

Your Compasses are not to be used constantly, for they will spoil you, that you cannot Draw without them, but only when you have finisht your drawing with Charcoal, you may measure if it be every way right, before you draw it with your Black-lead.

The Feather is to wipe out the Charcoal where it is drawn false, before you draw it again; and this you must be sure to do, or else you will be confounded with variety of strokes, so that you shall not know which is the right stroke.

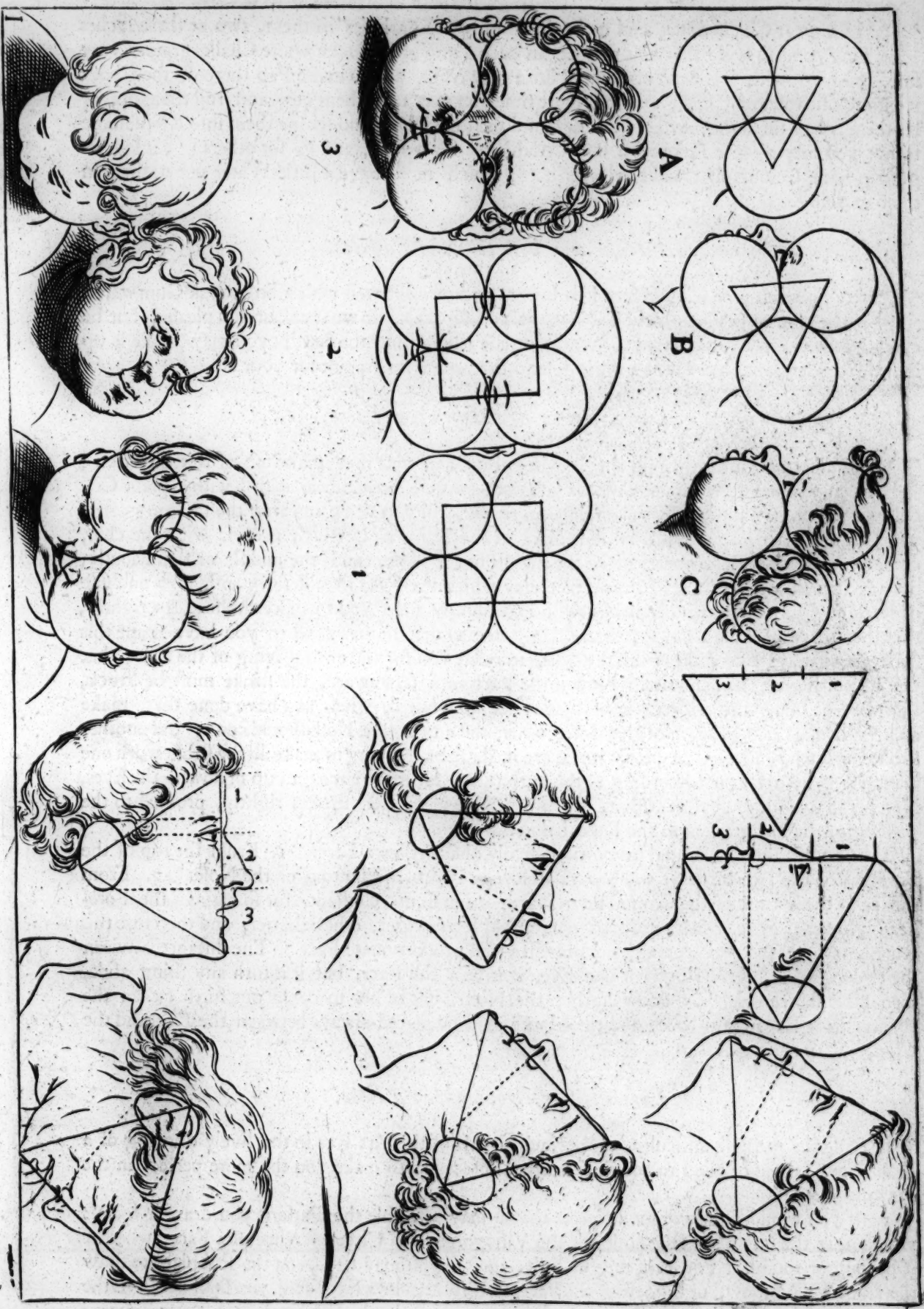
Having these Implements in readiness. The first Practice of a Drawer will be readily to draw Circles, Ovals, Squares, Pyramids, &c. And the reason of exercising you first in these, is, because in these you will be fitted for the performance of other Bodies; as for example, your Circle will teach you to draw Spherical Bodies, as the Sun, Moon and Stars, and the most Flowers, as the Rose, Dazy, &c. the most Vessels, as Cups, Basons, Bowls, Bottles, &c. the Square will fit you for all manner of Comportiments, Plots, Buildings, &c. your Pyramids for Sharp Steeples and Turrets, &c. your Ovals for Faces, Shields, &c. for it is impossible to draw the Body of a Picture, before you can draw the Abstract.

When you can do these, practice to draw Pots, Balls, Candlesticks, Pillars, a Cherry with a Leaf, &c. but be sure you be perfect in the out-stroke, before you go to draw the shadows within.

How to draw Pictures with Indian Ink.

HAVING the out-strokes of your Picture drawn with Black-lead, and the dust of your Charcoal well wiped off with a Feather; take a stick of *Indian Ink*, of the very best sort, for if it be whitish and hard within, it is naught and will not work well; a little place of it, you may wet with fair Water, or your Spittle, which you please; (though some do hold the latter to be the better, because it is not so subject to sink into the Paper, which to be sure must be very good Dutch Paper) having thus moistened one little place of the *Indian Ink*; you must have about six or eight small Pensils of several sizes, which must be put on little sticks, about three Inches long, the better to hold your Pensils, and so with one Pensil you must draw withal, and with the other Pensil at the other end of your stick, you must (it being a little wet in your Mouth) wipe off the hard edge; but be sure you do it very faint at first, and so you may shadow it higher as you please; but if you do work it too dark at first, you will be in danger of spoiling your Picture in making it lighter: the least touch of your Pensil, on the *Indian Ink*, in drawing of a Face, is enough: This way of drawing is very pleasant and delightful, and is much in use, and doth set off very finely, if your *Indian Ink* be not of the Counterfeit sort, but very good, of which you may have very good choice where this Book is sold, *viz.* at the Print Shop at the Exchange Stairs in *Cornhil*.

How



How to make Artificial Pastiles to draw withal.

TAKE a great Chalk-stone, and make deep furrows, or holes in them, two or three inches long, and so wide that you may lay in each a quill, then take white Chalk ground very fine, temper it with Oyl or Wort, and a little new Milk, and so make Pap thereof, then pour it into the furrows of Chalk, and in a short time you may take them out, and roll them up, or let them lye in them till they are quite dry, and then take them and scrape them into a handsome form: you may temper Lake with burnt Alabaster for a Red, and so for others; having regard to some Colours that will bind over-hard, which must have a little Water put to them in their grinding.

Another way how to make Pastiles.

TAKE Tobacco-pipe Clay before it is burnt, and grind it well with a little weak Gum water, and so put to it Virmillion, or Blew, or Yellow Oker, or what colour you please; but be careful your Gum water be but very weak, or else it will bind too hard, you may make it up in little Rowles, and then lay it a drying, and so scrape it to a point for your use.

Directions in drawing of a Face.

FOR the better assisting you in the drawing of a Face, you may make use of this direction; when you have drawn the Circle of the Face (which you must do at first with a plain Circular Line, without making any bendings in or out, till you come towards the finishing of it) you may make a stroke down from that place of the Fore-head, which is even with the chin, coming down where you should place the middle of the Nose, and the middle of the Mouth; observe that this stroke must be struck that way which the Face should turn, either to one side or straight right, and then this stroke will exceedingly help you to place the features rightly, that they may not stand all awry, but directly one under another; when you have made this stroke, you may make another stroke across, to guide you for the even placing of the Eyes, that one be not higher than another. Now if the Face turn downward, the stroke must be struck, that the Eyes may turn answerable with the Face downward, when you have done that, make another stroke for the length of the Nose, where the end of the Nose should come, and another stroke for the Mouth, that it be not made crooked, still observing to make all the strokes turn one way, either up or down, according as the Face turns, for if the Face turn up or down, the Eyes, Nose, and Mouth must turn with it, when you have made these strokes rightly, proceed to the placing of the Features, as in the Rules before.

There is this threefold equal proportion usually observed in a Face. 1. From the top of the Forehead to the Eye-brows. 2. From the Eye-brows to the bottom of the Nose. 3. From thence to the bottom of the Chin: but this proportion is not constant, for sometimes the Forehead is lower than at other times, and some Mens Noses longer, others shorter; and therefore this Rule is not always to be observed, but only in a well proportionate Face. The distance between the two Eyes, is just the length of one Eye, if it be a full Face, but if it turn any thing aside, then that distance is lessened accordingly; the Nostril ought not to come out further than the corner of the Eye in any Face, and the Mouth must be placed always between the Eyes and the Chin, just under the Nose.

Further Directions about a Face.

BECAUSE the greatest difficulty, and principal part of this Art lyes in the lively drawing of a Face, I thought good to add these further Directions to make you the more perfect in the drawing of it.

1. If you would rightly draw a Face, that it may resemble the Pattern you draw it from; you must in the first place take notice of the Visiognomy or Circumference of a Face, whether it be long or round, fat or lean, big or little, that so you may be sure in the first place to draw the right Visiognomy, or bigness of the Face, which if it be a fat Face, you shall perceive the Cheeks to make the side of the Face to swell out, and so make the Face look as if it were square; if a lean Face the Jaw Bones will stick out, and the Cheeks fall in, and the Face will look long and slender; if it be neither too fat nor too lean, the Face will be round for the most part.

When you draw the utmost Circumference of a Face, you must take in the Head, and all with it, otherwise you may be deceived in drawing the true bigness of a Face.



2. You must diligently, and judiciously discern and observe all the Master touches, which give Life to a Face, and discovers the graces or disposition of the mind, (wherein lyes the whole grace of the work, and the credit of the Workman) as you shall discern a smiling countenance most easily in the Mouth, when the corners of the Mouth turn up a little: a frowning countenance is easiest discerned in the Forehead, Eye-brows bending, and somewhat wrinkling about the top of the Nose, between the two Eye-brows; a stay'd and sober stay'd countenance, is best discerned in the Eye, when the upper Eye-lid comes somewhat over the Ball of the Eye; a laughing countenance is easily discerned all over the Face, and so is an angry wrathful countenance, by extraordinary frownings; also there are some touches about the Eyes and Mouth, which give life and spirit to a Face, which you must diligently observe, and you shall by little and little find out in good Masters works, which you should chiefly desire to imitate, and not Botchers.

General Rules for the practice of drawing.

1. **H**AVING your Charcoal neatly sharpened, you must at the first, in drawing of a Face, lightly draw the out-stroke or circumference of the Face, just according to the bigness of your pattern, making it to stand fore-right, or to turn upwards or downwards according to your pattern, then make some little touches where the Features, as the Eyes, Nose, Mouth, Chin, should be placed, not drawing them exactly at the first, and having thus exactly pointed out the places where the Features should be, begin to draw them more exactly, and so proceed, till the Face be finished, and then make the Hair, Beard, and other things about it? In making of a side Face, you need not at first exactly draw the Nose, Mouth and Chin, that stand in the outmost line, but only make it at first but a bare circumference, turning this way, or that way, according as the pattern doth, and then make the Mouth, Nose and Chin to come out afterwards, in the right places and just proportion.

2. The Circles, Squares and Triangles that are made in the Print, about the Face, are to guide your apprehensions the more readily to the framing of one, that being as it were led by a line, you may the more easily know where abouts to place the features, as Eyes, Nose, Mouth, &c. which when you are able to do without them, these are of no use at all, but only to guide you at the first to the placing of them.

3. In the third place you must be sure to place the Muscles in their right and proper places; by the Muscles I mean all the shadows that are caused by some dents, or swellings in the Face, and be able to find out the reason of every Muscle, that so you may proceed to work with the more judgment; you shall perceive the Muscles most in an old and withered Face, and you must first draw the principal of them, and then you may the more easily draw the lesser within; you must be very exact in the right placing of them, or else you spoil your draught, be it never so good.

4. Observe to make the shadows rightly, and be sure not to make them too dark, where they should be faint, for if you do, you can never recover it to make it light again, and so the whole face will be mar'd, and appear unhandsome; the shadows are generally fainter and lighter in a fair Face than in a swarthy Complexion; when you have finish'd your draught, you will do very well to give here and there some hard touches with your Pen, where the shadows are darkest, which will add a great life and grace to your drawing.

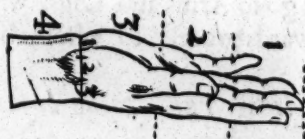
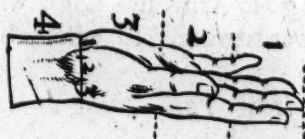
When you have finish'd the Face, then come to the Ears and Hair, wherein you must observe this rule, having drawn the out-line of it, you must first draw the principal curls or master-strokes in the Hair, which will guide you with ease to do the lesser curls, which have their dependance on them; always make your curl to bend, and turn exactly according to the pattern, that they may lye loose and fast, and not look as if they were stiff, stubborn and unplyable: When you have drawn the curls rightly, you must in the last place strike in the loose Hairs which hang carelessly out of the curls.

When you can draw a Face (which is the principal thing in the Art) then go to Hands and Arms, Legs and Feet, and so to full Bodies of Men and Women, which are the most difficult things, which if you can attain to perform, with a well grounded celerity, nothing will be difficult to you, but will be most easie, as Flowers, Birds, Beasts, Ships, or any other thing that is to be drawn by hand.

Of drawing Hands and Feet.

BUT to come particularly to Hands and Feet, which you ought to spend some time about, before you come to the whole Bodies, because they will be too difficult for you to enter upon till you have pretty well practis'd your hand in the drawing of other things, more especially

Hands



The particularities of Hands, scene
Within, without, on the Palm, on the Back
or Sydenhij's.

The proportion of the Hand, & length of 3 measures of the Note of which you are to make the three equally prick'd quarters marked perpendicularly 1. 2. 3. the length of which figures is divided into 2 equal parts thereby to adjoin a half's making a third part where these basic marked adf's 1. 2. 3. which we give unto the Rule of the Thumb and Fore finger near unto the said Thumb, rising up prick'd lines perpendicularly up unto the top of the right hand angles the figures marked above with 1 making a prick'd quill within the which the said Fore finger is conveyed, the length and scope thereby ascending the upper joint of the Middle finger. That being divided into 3 equal parts the two equal parts are the two upper parts shall be of equal height unto the upper joint of the Index finger, as appeareth in the figure of 5. M and represented at B. and the Thumb shall now exceed 5. second or middle joint of the Fore finger. Then right at 4th measure for 5. Write which is the measure of 5. Note the high or lower part of which is divided into 2 parts which shall give us for 10. heads, hence on the said 10. the same measures are observed as well in the hand, hence without or on the back marked A. as in 5. half's hence or within palm 5. 1/2. hence 2. 1/2. hence 4. 1/2. hence 6. 1/2. hence 8. 1/2. hence 10. 1/2. hence 12. 1/2. hence 14. 1/2. hence 16. 1/2. hence 18. 1/2. hence 20. 1/2. hence 22. 1/2. hence 24. 1/2. hence 26. 1/2. hence 28. 1/2. hence 30. 1/2. hence 32. 1/2. hence 34. 1/2. hence 36. 1/2. hence 38. 1/2. hence 40. 1/2. hence 42. 1/2. hence 44. 1/2. hence 46. 1/2. hence 48. 1/2. hence 50. 1/2. hence 52. 1/2. hence 54. 1/2. hence 56. 1/2. hence 58. 1/2. hence 60. 1/2. hence 62. 1/2. hence 64. 1/2. hence 66. 1/2. hence 68. 1/2. hence 70. 1/2. hence 72. 1/2. hence 74. 1/2. hence 76. 1/2. hence 78. 1/2. hence 80. 1/2. hence 82. 1/2. hence 84. 1/2. hence 86. 1/2. hence 88. 1/2. hence 90. 1/2. hence 92. 1/2. hence 94. 1/2. hence 96. 1/2. hence 98. 1/2. hence 100. 1/2. 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hands and feet, which are the most difficult members of the body to draw, next the face; by learning of which you will the more easily attain the rest, with less difficulty and greater perfection, and it is for certain a thing of most singular commendation and estimation, lively and exactly to draw a hand, which hath so many varieties of posture and action, and you will find it a very difficult thing to imitate it in every one of them, in the spirit and life of them, without some lameness or imperfection.

The actions and postures of the hand are so various, that I can give you no certain rule for drawing of them, only take this for a general, when you first draw it with Charcoal, you must not draw it exactly, that is to say, to make all the joynts or veins, or other things, to appear, but only lightly and faintly, to touch out the bigness of the hand, and the manner of the turning of it with faint touches, and not with hard strokes; and then if you have done that right, part the fingers asunder, or close according to your pattern, with the like faint stroke: then mark that place where any of the fingers do stand out from the others, and make a faint resemblance of it; having so done, if you perceive your draft to be right, proceed to draw it more perfectly, and make the bending of the joynts, the wrist-bone, and other principal things somewhat exactly. And lastly go over it again, and draw every small bending, or swelling of the fingers, and make the nails, knuckles and veins, so many of them as appear, and every thing else that you can discern. Observe this rule in all your drawings, that before you come to draw your draft with Black-lead, or other things, you must blow off the loose dust of the coal off from your drawing, or faintly to wisk over your drawing with a feather, that so you may leave it faint, so that you must but just perceive your strokes, and by this means you will the better see how to draw it again with your Black-lead, otherwise you would not be able to discern your strokes.

For the proportions of a hand, you have it sufficiently set down in the Print, by Lines and figures, which shews the equalities of proportion in a hand, and how many equal measures there are in it, which you should endeavour to be acquainted with, that so you might know when a hand is well proportioned, with just and equal distances; but I would you should take notice of this rule, or exception, according as the hand turns one way or other, the proportions must be shortned, according as they appear to the eye, as you shall see in the foreshortning of the hand in the Print; so much as the hand turns away from our sight, so much it loses of its ordinary proportion, and is made to shorten unto that proportion, that the eye judges of it, nay sometimes a whole, finger, sometimes two or three, or more, is lost to our sight, by the turning of the hand another way from us, and so they must be wholly left out, and not made. For feet there is not so much difficulty in the making of them as hands; and in drawing of them, you must proceed to the same way that was shewed for the making of hands. When you can draw hands and feet pretty well, then go to Arms and Legs, wherein is little difficulty; when you can draw the hands and feet, afterwards proceed to whole bodies.

Of drawing the whole Bodies, rules to be observed.

1. **I**N all your drawings you must draw it at first with your coal, but very lightly and faintly, for then you may the easier mend it, if you draw amiss.
2. In the drawing of a body, you must begin with the head, and be sure to give a just proportion and bigness to that, because all the body must be proportioned according to the head.
3. At the first drawing of the body with your coal, you must draw nothing perfect or exact, before you see that the whole draft is good, and then you may finish one thing after another as curiously as you can.
4. In drawing a body first draw the head, then the shoulders in their exact breadth, then draw the trunk of the body, beginning at the arm-pits (leaving the arms till afterwards) and so draw down to the hips and both sides, and be sure you observe the exact breadth of the waist: when you have thus done, draw first that leg that the body stands upon, and afterwards that leg that stands loose, or from the body, and last of all draw the arms, and then the hands, either joynted to the body or seperated from the body, according to your pattern.
5. In your drawing be sure you place the parallel joynts, sinews and muscles, directly opposite in a strait even line one against the other, as the shoulders, the arm-pits, the waist, the hips, the knees, and so every thing else, that one may not be higher or lower than the other, that the body may not seem crooked or deformed, but every parallel joynt bend, &c. may directly answer the other, that is opposite thereunto; and to this end you may strike a strait stroke directly cross the shoulders, to direct you to place them even and strait one against the other, so also you may do in other places, as the arm-pits, waist, hips, thighs, or any other place, where you should place one thing even with the other; for you must have the same care in all parts of the body, as you have in one place where any bending or members



of the body have or do require a direct opposition one against the other, you may make use of this help and direction.

6. Observe, that if the body turn one way or other, then this stroke must be so struck, so that it may answer the bowing of the body, as if the body stoop a little downwards, the stroke must be struck sloping or sideways, and so you must then make the shoulders and other things, which should stand strait against one another, to be somewhat higher than one another, so that that side that the body turns upon the shoulders, and other things that otherwise should be placed even one against the other, must be made somewhat lower than the other side, more or less, according as the body stoops more or less.

7. As you are to be careful in the right placing of all level or parallel joynts, bendings, sinews and musles, so you must look exactly to all perpendicular joynts, musles, &c. that is, when you have drawn the outmost draught, and are come to draw the joynts and musles, that are contained within the body, you must be as exact in placing them that are directly just under one another, as you are in placing them even, that are opposite one to another: and to this end that you may place things exactly perpendicular, that is in a strait line under one another: you may strike a strait perpendicular line from the throat-pit down to the privities, just in the middle or seam of the body, where you may discern the parting of the ribs, and from thence strait down to the feet, as you shall see in the Print of the man, the line will direct you to place things even perpendicular, that the body may stand straight upright, and not appear crooked and awry.

8. Take notice of the bowings and bendings that are in the body, to make that part that is opposite to that which bends to answer to it in bending with it, as if one side of the body bent, in the other side must stand out answerable to the bending in of the other side, if the back bend out the belly must bend in, if the belly come in, the back must stick out, if the breech stick out, the thigh that answers to it in opposition, must come in: so also in any other part of the body; as if the knee bend out, the ham that answers to it must come in, and so for any other joynts in the body this rule must be exactly observed, otherwise the body will be made grossly and absurdly, and will be very gowty without any proportion.

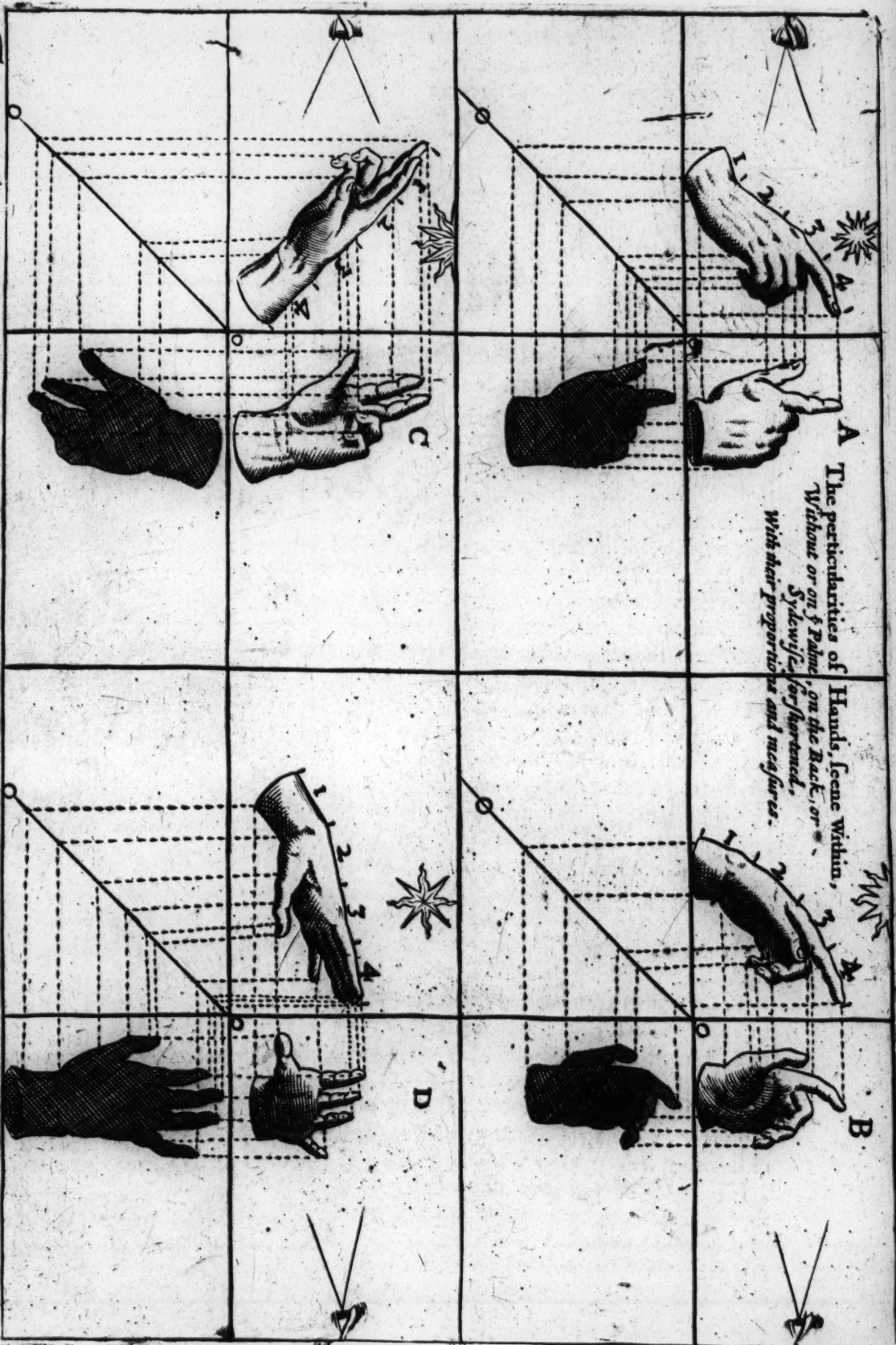
9. Endeavour to make all things of an equal proportion and bigness, not to make one arm bigger than the other, or one leg bigger than the other, or one breast bigger than the other, or any one part of the body in an unjust proportion, but as every thing must answer to the bigness of the face, so one member must answer to another in bigness, that so there may be a sweet harmony in the parts of the body; that it may not have broad shoulders, and a thin slender waste, a raw-bone arm, and a thick gowty leg, or any part disproportionable from the other, unless it be so, that any part of the body doth turn awry from our eye, as if the one arm should be seen side-ways, and the other foreright, then the one arm must be made so much less than the other, by how much it turns away from our sight, and appears less to our eyes, and if so one leg be seen full or fore-right, and the other leg be seen sideways, then it must be made so much less than the other, by how much it turns away from your sight.

10. As you must observe a just proportion in the bigness of your draught, so also in the length, that one thing may not be too long for the other, the body may not be too long for the legs, nor the legs too short for the body, nor one leg longer than the other, or one arm longer than the other, but every thing may have its just proportion both for bigness and length, unless it be so, the body shortens awry in any part from your sight, as if one leg stand behind another, it must be made so much the shorter than the other, according to that distance that it is removed from your eye, and so if one arm remove it self any whit from your sight that comes first to the eye, and stands nearest to the sight, must be made longer than the other, and the other be made so much the shorter, by how much it turns away from your sight. So likewise, if any part of the body be fore-shortened, that is do appear so to your eye, as to hinder the light of the full latitude of that part of the body (as you shall see more perfectly shown when I come to fore-shortnings) I say upon such an occasion, the body, or that part of the body must be made to shorten, according to that proportion that the eye judges of it, as you shall see perfectly in the print of the fore-shortnings.

11. Observe the exact distance of one thing from another, how far distant they are, that you may be exact in your draught, and perfectly imitate your Pattern.

12. Observe how much one part of the body sticks out beyond the other, or falls in with in the other, or whether it stands even with the other, and to this end you may strike a small stroke down from the top of the shoulder along by the out-side of the body strait down to the feet; and this will direct you how far one part of the body should stand out beyond the other, and how far other parts should come in; let nothing be done without a rule and judgment.

A The particularities of Hands, scene Within, Without or on $\frac{1}{2}$ Palm, on the Back, or Symples, for shortened, With their proportions and measures.



To shorten the Hands, must draw the perpendicular lines from $\frac{1}{2}$ Hand scene, likewise on a side marked with their proportions and measures 1, 2, 3, 4, upon which the drawing would be cast them down into the Diagonall marked at the end with O, and then carry the reflexion of them levelly from the intersections of those perpendicular lines in the Diagonall afore said until you come under the tipple of the shortened Hands thereby to get the shadow from which shadow you must perpendicularly raise perpendicular lines until they meet or intersect level lines drawn also from the first hand scene side so will the intersections of the said last named level lines and raised perpendiculars give the shortened Hands A, B, C, D, E. Even as the Eye would see the Symples or sloping Hands, so shall the workman see the Hand shortened by means of the said shadow.

13. Let nothing be done hard, sharp or cutty, that is, let not the bendings that are either in the body or in the joynts be made as if they were dents or cuts in the Flesh with sharp corner strokes, but finely round and sloaping, like bendings, and not like cuts in the body; this is a common fault among Learners, which they cannot chuse but commit, and therefore you should be the more careful of it, by imitating your pattern exactly, in the very manner of making every stroke and touch and indeavour to find out the ground and reason of every small stroke and touch that is given, for nothing must be done without judgment.

Now I have given your directions for the drawing of the body, I would in the next place give some instructions, whereby you might have some judgment in a good draught.

Of Perspective Proportion.

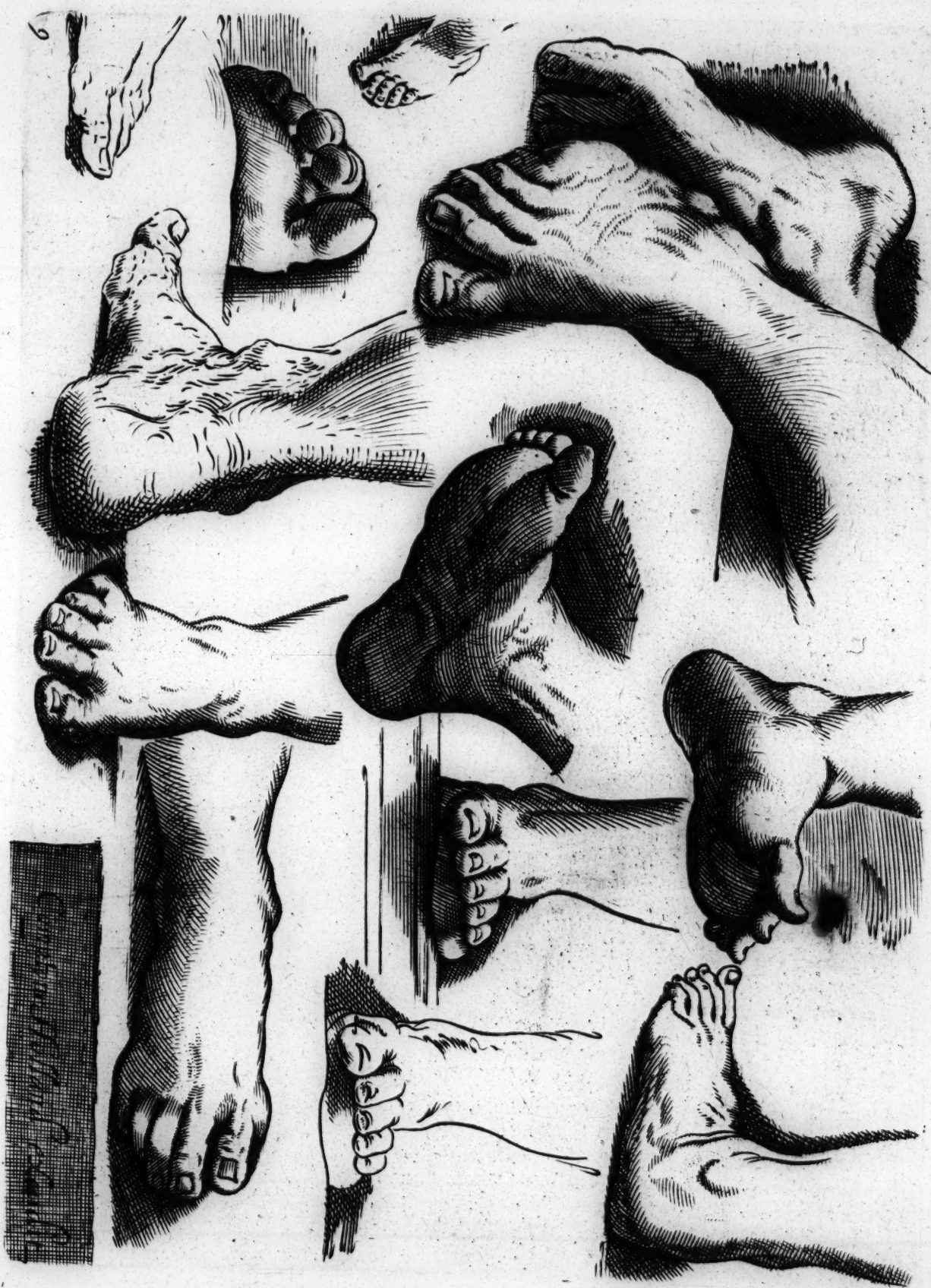
Perspective proportion differeth much from the former, for according to the distance of the eye from a thing it judgeth what proportion it hath, as if one part of the body come nearer to the eye, than the other, it is made so much bigger than the other part of the body, which turns away from the eye, as if one leg stand behind another; the foremost leg that comes first to the eye must be made somewhat bigger and longer than the other, because the eye judgeth so of it; and so it is for any other part of the body, the proportion must be lessened, according to the distance that it is from the eye.

The second thing in good draughts, is graceful posture, and proper action, that is, that the true natural motion of every thing be expressed in the life and spirit of it, that is to quicken the life by art, as in a King to express the greatest Majesty, by putting him in such a graceful posture, as may move the spectators with reverence to behold him; and so to make a Souldier; to draw him in such a posture, as may betoken the greatest courage, boldness and valour; and so to make a Clown in the most detestable and clownish posture; and so for every thing, that the inward affection and disposition of the mind be most lively expressed in the outward action and gesture of the body. Now that you might attain to the Skill herein, I would counsel you diligently to observe the work of famous Masters, who do use to delight themselves in seeing those that fight at cuffs, to observe the eyes of privy Murderers, the courage of Wrestlers, the actions of Stage-players, the enticing allurements of Courtesanes, and those who are led to execution, to mark the contracting of their brows, the motions of their eyes, and the carriage of their whole body, to the end they might express them to the life in their drawings and works.

The third thing in good draughts, is looseness, that is, that the body be not made stiff in any part, but that every joynt may have its proper natural bending, so as it may with greatest life express your intention, that the figure may not seem lame, and the joynts stiff, as if they were not plyable or capable of bending, but every joynt and limb may have its proper and natural motion according as it may best suit with, and become the posture in which the figure is set.

The fourth thing in drawing, is fore-shortning, which is to take things as they appear to our eye, and not to draw the full length and proportion of every part, but to make it shorter, by reason the full length and bigness is hid from our sight; as if I would draw a ship standing fore-right, there can appear but only her fore-part, the rest is hid from our sight, and therefore cannot be expressed; as if I would draw a horse standing fore-right, looking full in my face, I must of necessity fore-shorten him behind, because his sides and flanks appear not unto me; wherefore observe this rule. That you ought rather to imitate the visible proportion of things, than the proper and natural proportion of them; for the eye and the understanding together, being directed by the perspective art, ought to be the guide, measure and judge of drawing and painting.

The fifth thing in good drawing is, That every thing be done by the guidance of nature, that is, that nothing be expressed, but what doth accord and agree with nature in every point; as if I would make a man turning his head over his shoulder, I must not make him to turn more than nature will permit, nor must any thing be forced beyond the limits of nature, neither must any thing be made to come short of nature; but nature, though it is not to be strained beyond its center, yet it must be quickened to the highest pitch of it, as if I would express a King, I must express him in the most Majestick posture that I can invent; and if I would draw a Clown, I must draw him in the most clownish action that can be, yet must neither the one nor the other be drawn in such a posture as will not agree with the motion of nature, that is, to draw such a posture which a man cannot imitate with his natural body, and so for any thing else whatsoever, nature must be the pattern of all kind of draughts.



Of drawing Garments.

WHen you are able to draw naked draughts well, you will find it a matter of no great difficulty to do bodies with garments upon them, yet nevertheless it will not be amiss to give you some directions about the same.

1. You must draw the outmost lines of your Garments lightly, and in this you must be very careful, for the whole grace of a picture lyes in the outmost draught, and not in the curious works within. Now that you might perform this exactly, you must suit your garments to the body, and make them bend with the body, and not make them strait there where the body should bend; if you would rightly fit the garments to the body, you must observe which part of the body bends in or out, that the garment may answer to the body, upon the least turning one way or other the garment may turn with it; you must also observe where the body should come if it were naked, and there draw your garments in the right place, making it bend according as the joynts and limbs of the body should bend: Excellent workmen do make the body appears plainly thorow the garments, especially where the garments lye close and flat upon the body, and indeed where ever the body bends in or sticks out in any one part more than other, it should be shewn in a plain and visible manner through the garments, which thing you must take notice of in your drawing, either by a pattern, or by the life.

2. You must begin at the upper part of the garment, and so draw down that part of the garment on both sides, that lies closest upon the body, before you draw the loose part that flies off from the body, for if you draw the loose part of the garment first; before you have finisht that part that lies next upon the limbs and parts of the body, you will be soon out, and be apt to place the body crooked and awry; and therefore many workmen draw the naked first, and afterwards put on their garments, for by that means they can better see to place the garments rightly, so as to hang even upon the body, and by this means you will be sure to place the body strait that it be not crooked, by drawing those parts of the garment first, that lie nearest upon the limbs.

3. You must draw the greatest folds first, and so stroke your greater folds into less, and be sure you let one fold cross another.

Directions for the bestowing of your Lights.

1. **L**et all your lights be placed one way in the whole work, as if the light falls side ways on your picture, you must make the other side, which is farthest from the light, darkest, and so let your lights be placed altogether on the one side, and not confused to make both sides alike lightned, as if it stood in the midst of many lights, for the body cannot otherwise be lightned equal in all places.

1. Because the light doth not with all its brightness illuminate any more than that part that is directly opposite unto it.

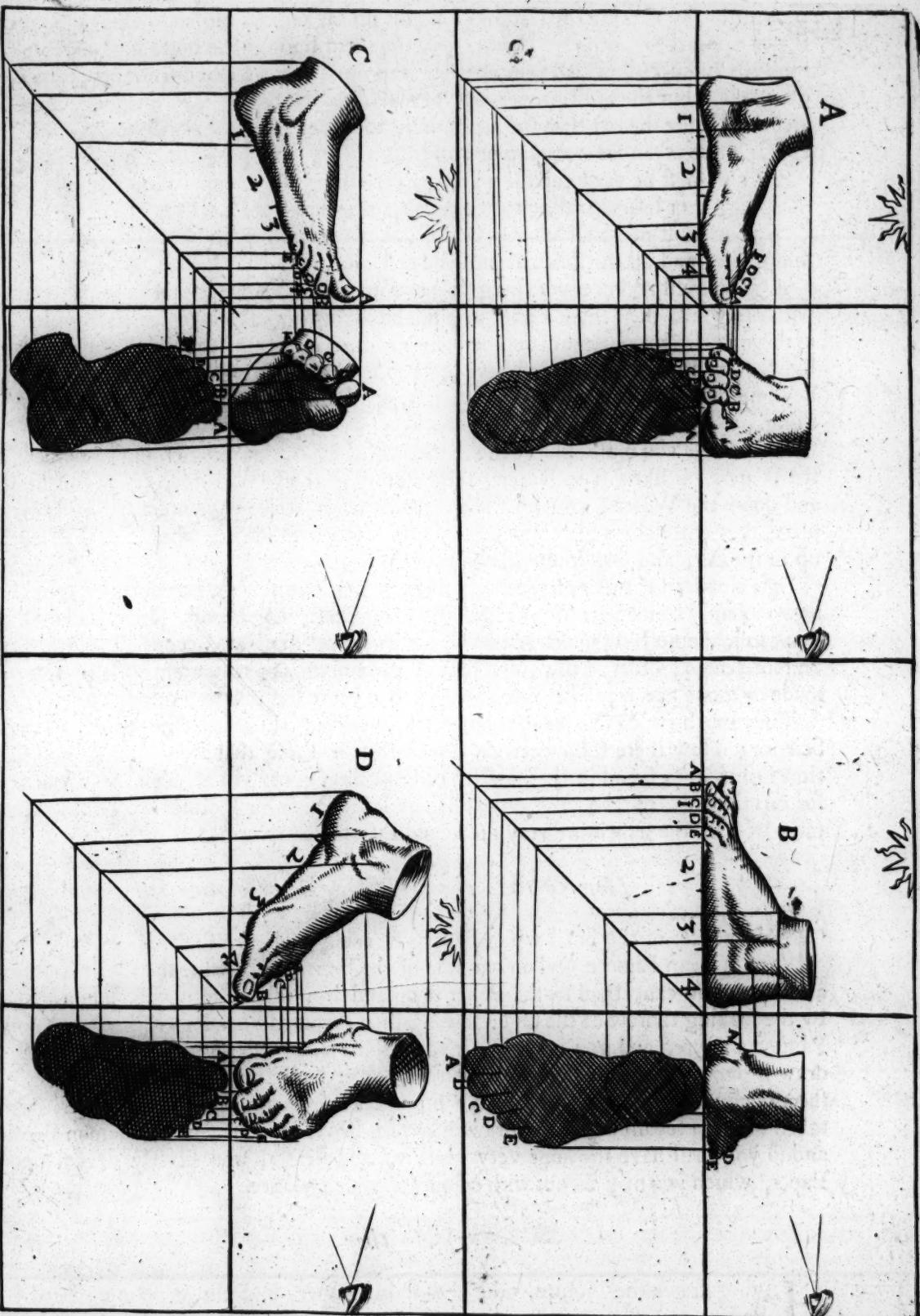
2. The second reason is taken from the nature of our eye, for the first part of the body coming to the eye with a bigger angle is seen more distinctly; but the second part being further off, comes to the eye in a lesser angle, and being lesser lightned is not so plainly seen as the first. By this rule if you are to draw two or three men standing together, one behind another, though all of them receive equally the light, yet the second, being further from the eye, must be made darker, and the third more dark.

2. That part of the body must be made lightest, which hath the light most directly opposite to it, as if the light be placed above the head, then the top of the head, must be made lightest, the shoulders next lightest, and so it must loose by degrees.

3. That part of the body, that stands furthest out, must be made the lightest, because it comes nearer to the light, and the light loseth so much of its brightness, by how much any part of the body bends inward, because those parts that stick out do hinder the lustre and full brightness of the light from those parts that fall any thing more inward, therefore by how much one part of the body sticks out beyond the other, it must be made so much lighter than the other, or if it fall more inward, it must be made more dark.

Sattins and Silks, and all other bright shining stuffs, have certain bright reflections, exceeding light, with sudden bright glances, especially where the light falls brightest, and so the reflections are less bright, by how much the Garment falls more inward from the light.

The like is seen in armour, bras pots, or any other glittering Mettals, you shall see a sudden brightness in the middle or centre of the light, which discovers the shining nature of such things.



To foreshorten feet seen forwards, you must make the sole side wth his proportions and measure some on the inside of the foot marked A. and from those proportions and measures marked 1, 2, 3, 4. draw down perpendiculars until they cut the Diagonal, and connect these lines. You will, to make the shadowed foot under the place of the foreshortened foot, and from the said shadowed you must raise perpendiculars into the place of the side foot to be shadowed which there meeting with the said lines that proceed from the first foot by intersections of them there, give us the said foot geometrically foreshortened as appears here represented, wherein the toes of the feet are marked A, B, C, D, E, and the sole is to be observed for the foot seen by the heel marked B, and also for the foot marked with C, seen on the forepart, and lastly in like sort for the foot marked D as are foreshortened by the same rules as the former.

Of Landskips.

Landskip is expressing of Land by Hills, Woods, Castles, Seas, Vallies, Ruins, Rocks, Cities, Towns, &c. and there is not so much difficulty in it, as in drawing Figures, therefore take only these Rules for it.

1. The best way of making Landskips, is to make them shoot away one part lower than another, which hath been practised by our best Workmen of late, but others have run into a contrary error, by making the Landskip mount up higher and higher, till it reach up a great height, that it appears to touch the Clouds, as if they had stood at the bottom of a Steeple, when they took the Landskip, which is altogether improper, for we can discern no prospect at the bottom of an Hill, but the most proper way of making a Landskip, is to make the nearest Hill highest, and so to make the rest that are further off, to shoot away under that, that the Landskip may appear to be taken from the top of an Hill.

2. You must be very careful to lessen every thing proportionable to their distance, expressing them bigger or less according to the distance they are from the Eye.

3. You must make all your lights fall one way, both upon the Ground and Trees, and all things else, and all the shadows must be cast one way.

4. You must make every thing to have its proper motion, as Trees, when they are shaken with the wind, their smaller and more pliable Boughs must be remembered with such an action, as they may strike one against another, by yielding and declining from that part whence the wind blows; the stiffer boughs must have less bending and motion; you must likewise observe the bending of a twig when a Bird sits upon it, so likewise if it be forced or pressed with any other thing.

So likewise you must observe the motions of the Sea, by representing the divers agitations of the Waters, as likewise in Rivers, the flashings of the Waters upon Boats and Ships floating up and down the Waters, you must also represent the motions of Waters falling down from an high place, but especially when they fall upon some Rock or Stones, where you shall see them spirting up in the Air, and sprinkling all about.

Also clouds in the Air require to have their motions now gathered together with the winds, now violently condensed into Hail, Thunder-Bolts, Lightning, Rain, and such like; finally, you can make nothing which requireth not its proper motions, according unto which it ought to be represented; observe this rule, that all your motions which are caused by the wind, must be made to move one way, because the wind can blow but one way at once.

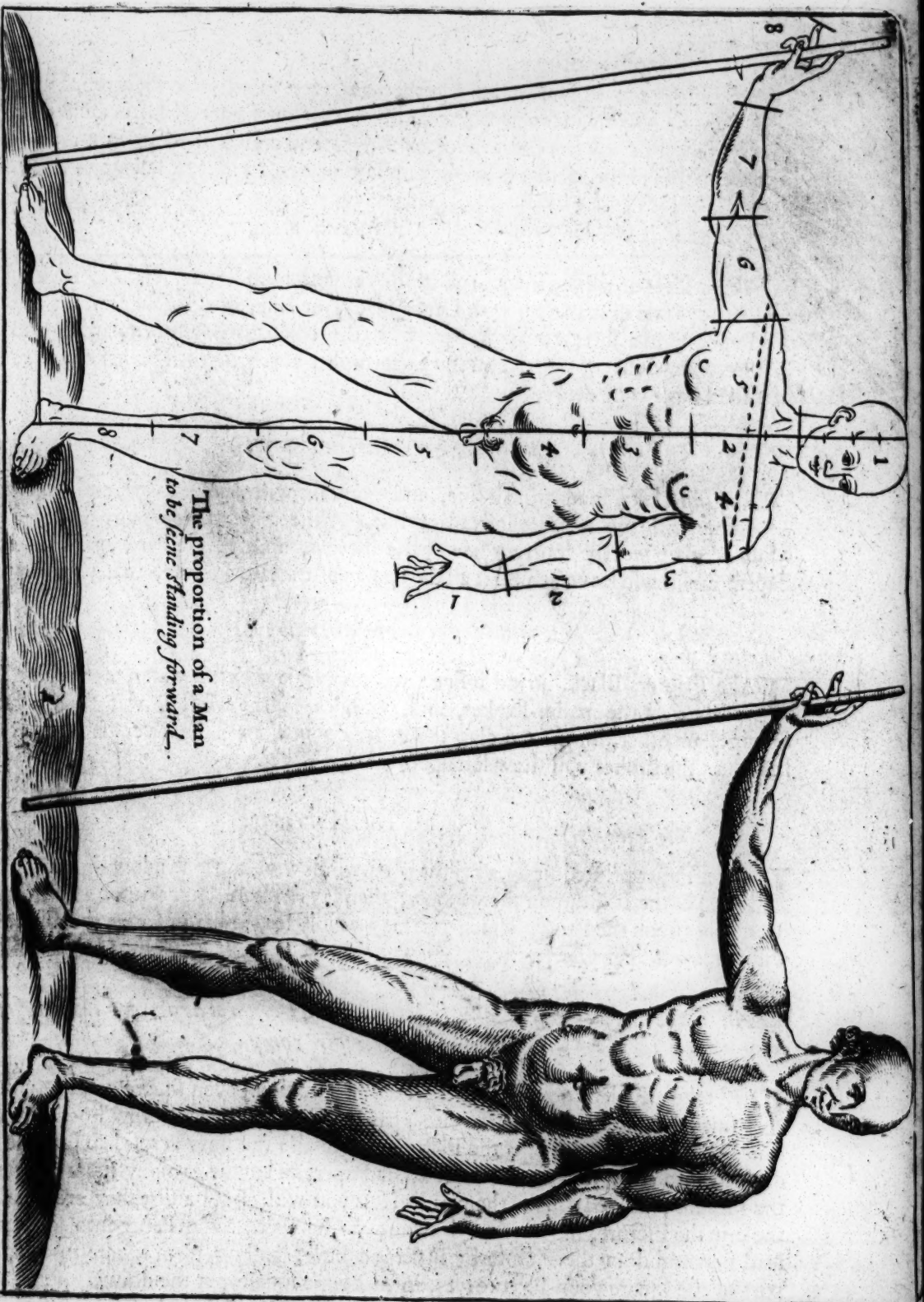
Thus much for directions to those who are contented to take some pains to attain so noble a Science; Now there follow certain directions for those that are unskilful, and have not spare time sufficient to spend in the practice of those directions, yet are desirous upon occasions, and for certain ends, to take the Copies of some lesser Prints or Pictures which they often times may meet withal, the which are very facile and easie to be performed.

How to take the perfect draught of any Picture.

TAKE a sheet of the finest white Paper you can get, *Venice Paper* is the best, wet it all over with clean Linseed Oyl on one side of the Paper, then wipe the Oyl off from the Paper, as clean as you can, then let the Paper stand and dry, otherwise it will spoil a Printed Picture, by the soaking thorow of the Oyl; having thus prepared your Paper, lay it on any Printed or Painted Picture, and you may see perfectly thorow, and so with a black lead Pen, you may draw it over with ease; after you have thus drawn the Picture on the oyled Paper, put it upon a sheet of clean white Paper, and with a little stick pointed, or which is better, with a Feather taken out of a Swallows wing, draw over your strokes which you drew upon the oyled Paper, and so you shall have the same very prettily, and neatly, and exactly drawn upon the white Paper, which you may set out with colours at your pleasure.

Another way.

HAVING drawn the Picture, take the oyled Paper, and put it upon a sheet of clean white Paper, and prick over the drawing with a Pen, then from the clean sheet that was pricked, pounce it upon another, that it take some Small-coal, powder it fine, and wrap it in a piece of some fine linnen, and bind it up therein loosely, and clap it lightly over all the pricked line by little and little, and afterwards draw it over again by little and little, and afterwards draw it over again with a Pen or Pensil, or what you please.



*The proportion of a Man
to be scene standing forward.*

In this figure is to be observed that from the top of the head to the sole of the feet is 8 measures of the head, and the head is length of the nose, the which measures are divided upon a perpendicular line: viz. the head figured with 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 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Another way.

Take a sheet of fine white Paper, and rub it all over on one side with Black-lead, or else with Vermillion tempered with a little fresh Butter, then lay the coloured side upon a sheet of white Paper, then lay the Picture you would copy out upon the other side of the coloured Paper, and with a small pointed stick, or with a Swallows quill go over all the strokes of your Picture, and then you shall have your strokes very prettily drawn on the white Paper.

Another way.

Take a piece of white Lanthorn horn, and lay it upon your Picture, then with a hard nipt Pen made with a Ravens quill, draw the stroke of your Picture upon the Horn, and when it is dry, breath upon the horn twice or thrice, and press it hard upon a piece of white Paper a little wetted, and the Picture you drew upon the horn, will stick fast upon the Paper.

Another way.

Take a sheet of white Paper, rub it all over with fresh Butter, and dry it in by the fire ; then rub one side of it all over with Lamb-black, or lake, or any other colour finely ground: lay this Paper upon a sheet of fair Paper, with the coloured side downwards, and upon it lay the Picture you would copy out, and trace the strokes over with the Feather of a Swallows wing, and you shall have your desire.

Another way.

Take somelake, and grind it fine, and temper it with Linseed Oyl, and afterwards, with a Pen, draw with this mixture instead of Ink, all the out-strokes of any Paper Picture, also the Muscles, then wet the contrary side of the Picture, and press it hard upon a sheet of clean white Paper, and it will leave behind it all the strokes of the said Picture, that you drew over it.

Another way.

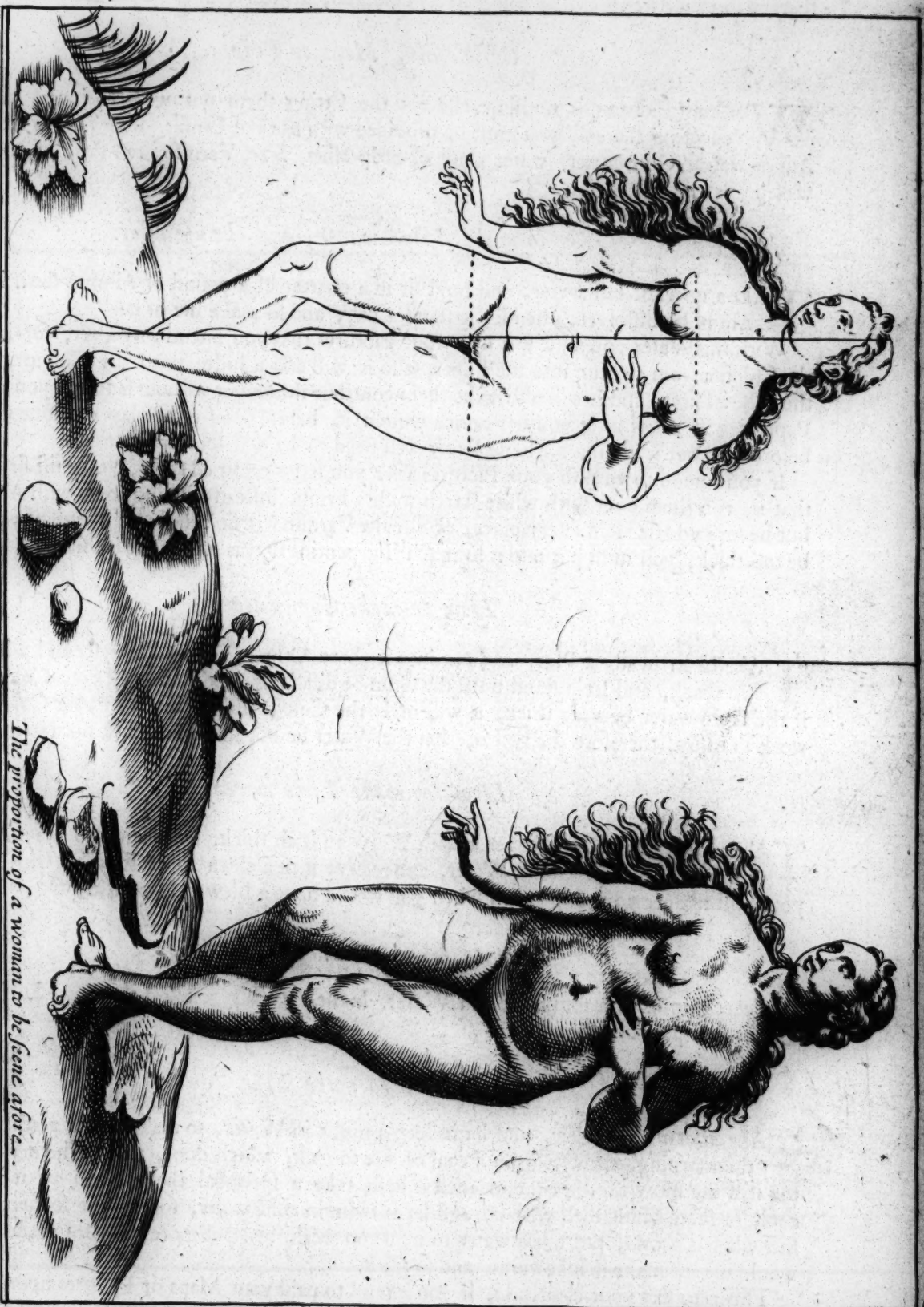
Take Printers Black, grind it fine, and temper it with fair water, and with a Pen dipt therein, draw over the master-strokes, and out-lines of the Muscles, wet then a fair Paper with a Sponge, or other thing, and clap the Paper upon it, pressing it very hard thereupon, and you shall find the strokes you drew left upon the fair Paper.

Another way.

Lay a Paper printed upon a bright glass window, or paper window that is oyled with the back-side of the Print upon the window, then lay a clean Paper upon the Print, and draw the out-strokes upon the Paper, which you may visibly see, it being set up against the light, and if you will shadow it finer you may.

An Easie way to lessen any Picture, that is, to draw a Picture from another, in a lesser compass.

First take a Ruler and a Black-lead Plummet made an even square ; now, you must divide the square in divers equal parts with a pair of Compasses, and draw lines with a Ruler, Black-lead and Plummet quite over the Picture, make also the lines across, so that the Pictures may be divided into equal squares, then take a fair Paper, and make as many squares upon it as there is in the Picture ; you may make them as little as you will, but be sure they are equal in number with those in the Picture, having thus drawn over the Picture and Paper into squares ; take a Black-lead Pen and draw the Picture by little and little, passing from square to square, and in what part of the square your Picture lyes, in that same square put the drawing, and in the same place of the square upon the Paper, until you have finished the whole, then draw it over with a Pen, in which second drawing of it over, you may easily mend any fault ; when it is dry, rub it over with the crum of White-bread, and it will take off all the Black-lead strokes, and your draught only will remain fair upon the Paper.



The proportion of a woman to be seen afore.

The Proportion & measure of a woman to be seen afore, is like the man, excepting that the measure of the breadth betwene the shoulders of the woman contains but 2 lengths of the face, as appears by the pricked line adwarte the breasts and from the Hipses to the Buttocks. 2 lengths of the head, marked with an other crosse pricked line; which maketh the difference betwene the man & woman and you must make the Armes Thighes & Legges fatter and plumper then mans, even to the wrists & ancles. Also you must not make the muscles as of a man.

An easie way to take the natural and lively shape of the Leaf of any Herb or Tree, which thing passeth the Art of Man to imitate with Pen or Pensil.

First take the Leaf that you would have, and gently bruise the ribs and veins on the backside of it, afterwards wet that side with Linseed Oyl, and then press it hard upon a piece of clean white Paper, and so you shall have the perfect Figure of the said Leaf with every vein thereof so exactly exprest, as being lively coloured, it shall seem to be the truly natural.

Of Washing Maps or Prints.

Washing Pictures is nothing else but the setting them out with Colours, and for the effecting thereof, you must be provided with store of Pensils, some smaller than another, Allum-water, Gum-water, water made of Soap-ashes, Size, Varnish, and store of good Colours well prepared.

How to make Allum-water, and the use of it.

Take a quart of fair water, and boyl it in a quarter of a pound of Allum, seeth it until the Allum be dissolved, then let it stand a day, and so make use of it.

With this Water you must wet over your Pictures that you intend to colour, for it will keep the Colours from sinking into the Paper, also it will add a lustre unto the Colours, and make them shew fairer, and it will also make them continue the longer without fading; you must let the Paper dry of it self after you have once wetted it, before you either lay on your Colours, or before you wet it again, for some Paper will need to be wet four or five times.

If you intend to varnish your Pictures after you have coloured them, you must first size them, that is, rub them over with white starch with a brush, instead of doing them with Allum-water, but be sure you size it in every place, or else the Varnish will sink thorow: Note, if your Varnish be too thick, you must put into it so much Turpentine Oyl as will make it thinner.

How to make Gum-water.

Take clean water a Pint, and put into it three Ounces of the clearest and whitest Gum-Araback, and let it stand until the Gum be dissolved, and so mix all your Colours with it; if the Gum-water be very thick, it will make the Colours shine, but then your Colours will not work so easily, therefore the best is, that the Water be not made too thick nor too thin.

How to make Lime-water.

Take unslak't Lime, and cover it with Water an Inch thick, let it stand so one night, in the morning pour off the clear Water, and reserve it in a clean thing for use; with this Water you must temper your Sap-green when you would have a blew colour of it.

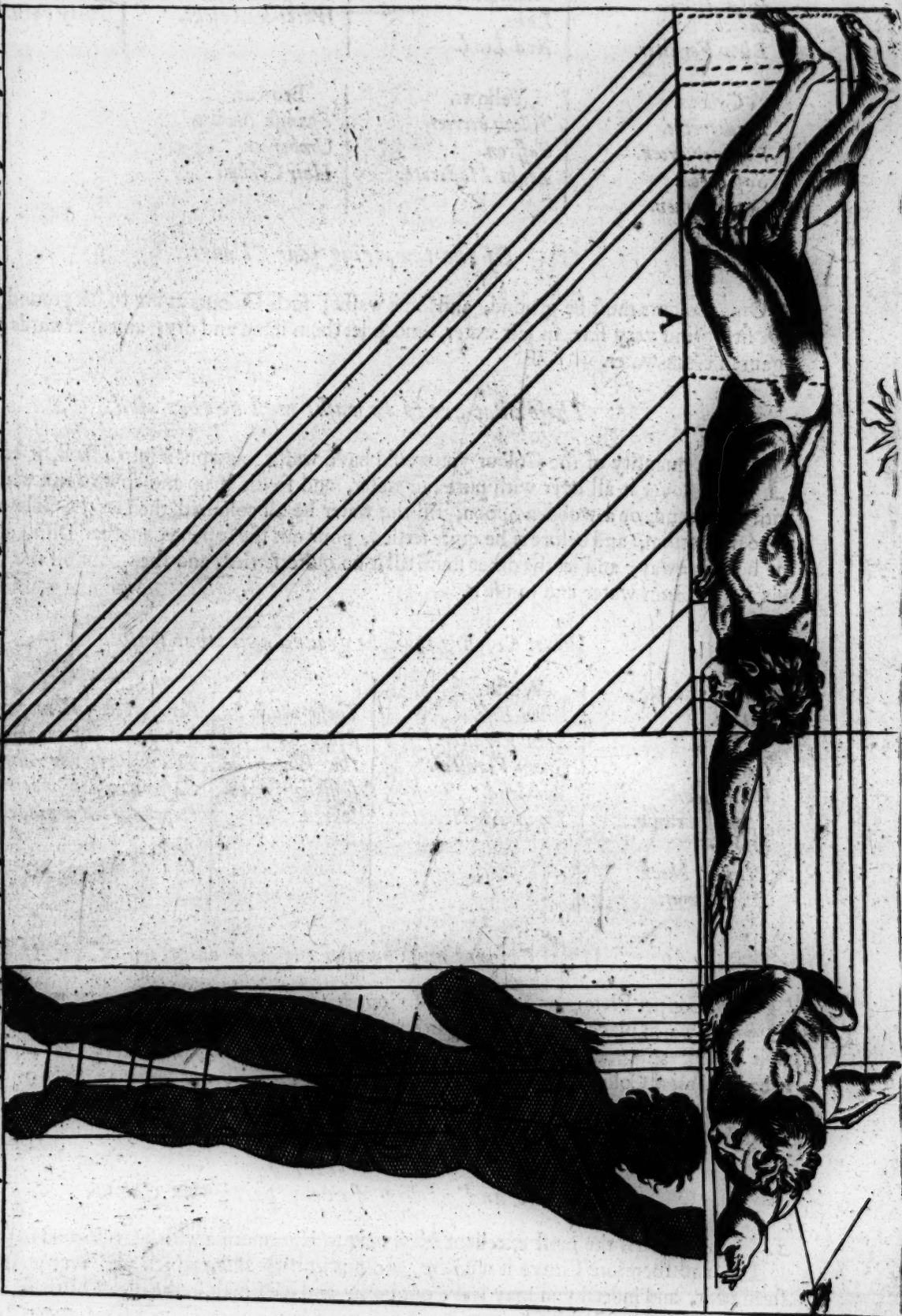
How to make Water of Soap-ashes.

Steep Soap-ashes a night in Rain Water. In the morning pour off the clearest. This Water is to temper your Brazil withal.

How to make Size.

Take a quantity of Grew, and let it steep a night in Water, to make it the readier to melt in the morning, then set it on a coal of fire to melt, which done, to try whether it be neither too stiff nor too weak, for the meanest is best, take a spoonful thereof and set it in the air to cool, or fill a Musle-shell with it, and let it swim in cold water, to cool the sooner; if it be too stiff when it is cold, put more water to it, if too weak then put more grew into it, and when you would use it, make it lukewarm, and so use it.

This is to wet your cloaths in, if you intend to paist your Maps or Pictures upon Cloth, you may take white Starch, and wet your sheet, and wring it out, and so strain it upon a frame, or nail it, stretched upon a wall or board, and so paist your Maps or Pictures thereon.



The whole figure of Mans body foreshortened a litle on the Syde and secue by the top of the head the back Vpward
 The precedent demonstration shall serue vs in this figure foreshortened seen by the top of the head, w^{ch} shew alteration of any thing for
 the lynes that mount perpendicularly preceeding from the figure of the shadow vnto the leuell lynes of the first figure
 marked A their intersechons doe herein giue our figure foreshortened, seen by the topp of the Head,

The Names of all the Colours pertaining to Washing.

Blews.	Reds.	Whites.	Blacks.
Blew Bife.	Vermillion.	Ceruse.	Printers Black.
Indico.	Lake.	White-lead pickt.	Ivory burnt.
Blew Verditer.	Red-Lead.		
Greens.	Yellows.	Browns.	
Verdigreece.	Yellow berries.	Spanish Brown.	
Verditer green.	Saffron.	Umber or	
Sap green.	Light Masticote.	Hair Colour.	
Copper green.			

Of the tempering your Colours.

Some Colours must be ground, and some washt; such Colours as are to be ground, you must first grind very fine, in fair water, and so let them stand and dry, and afterwards grind them again in Gum-water.

Those that are to be washt must be thus used.

Take a quantity of the Colour you would have washt, and put it into a shell, or earthen Dish, then cover it all over with pure fair water, and so stir it up and down for a while together with your hand, or a wooden Spoon, till the water be all coloured, then let the Colour sink a little to the bottom, and before it be quite settled, pour out the top into another Dish, and so fling the bottom away, and let the other stand till it be quite settled, and then pour off the Water, and mix it with Gum-water and so use it.

What Colours must be ground and what washt.

Ground.	Washt.		Steapt.
Indico.	Blew Bife.	These must be steapt only till the Water be sufficiently co- loured.	Verdigreece in Vinegar.
Lake.	Blew Verditer.		Sap-green in Vinegar.
Ceruse.	Green Verditer.		Yellow-berries in Allum-water.
White-lead.	Red-lead.		Saffron in fair water.
Spanish brown.	Light Masticote.		Copper green is made of Copper.
Umber.			
Printers black.			
Ivory burnt.			

What Colours must be ground, and what washt.

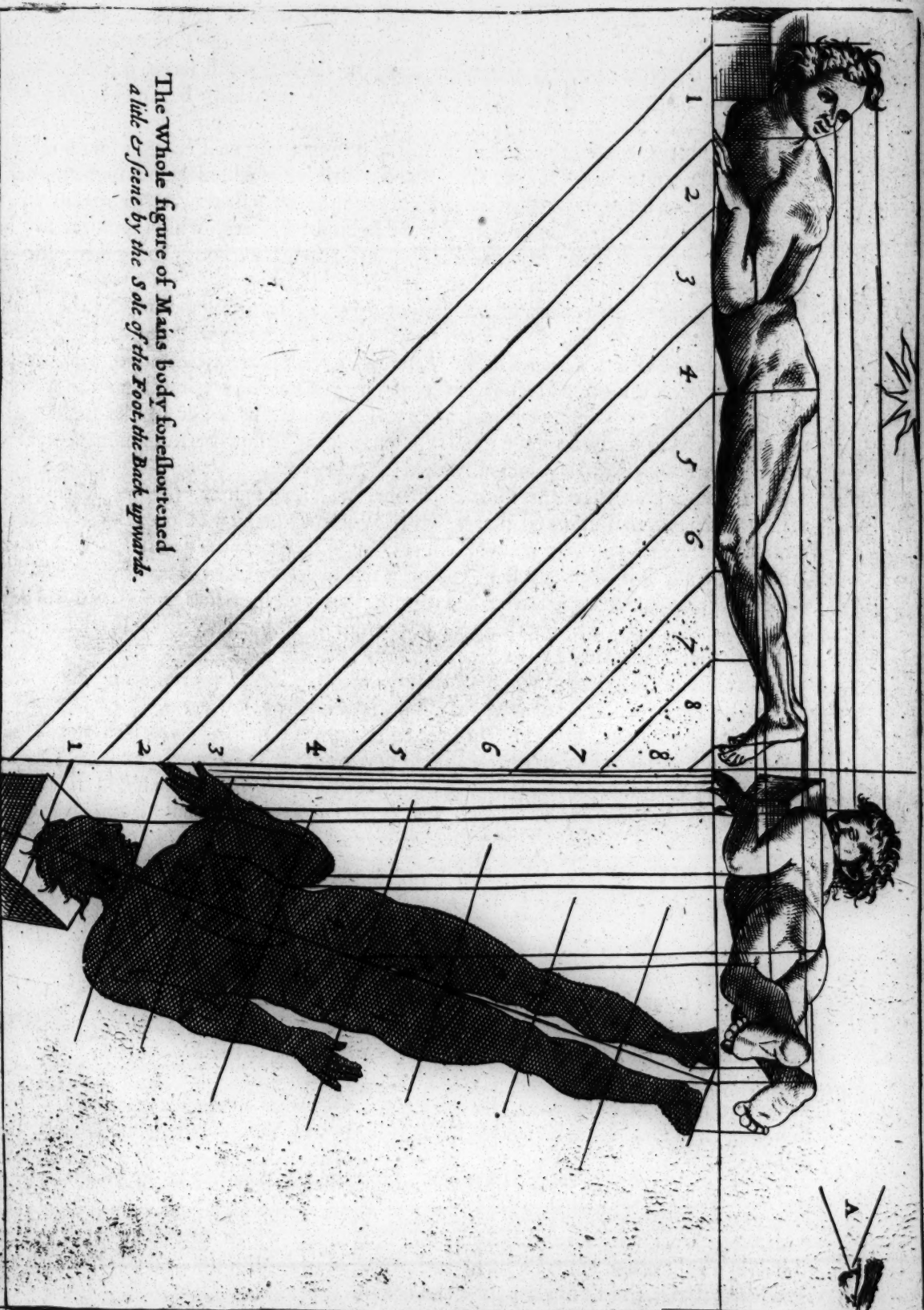
Take Copper Plates, or any shreds of Copper, and put distilled Vinegar to them, set them in a warm place until the Vinegar become blew, then pour that Vinegar into another Pot, well leaded, and pour more Vinegar upon the Copper Plates again, letting that also stand until it be of a blew Colour, then pour it unto the former Liquor; this you may do so often until you have liquor enough, then let that liquor stand in the Sun, or upon a slow fire till it be thick enough, and it will be an excellent green.

The use and nature of every particular Colour.

1. **B**lew Bife is the most excellent blew next to Ultramarine, which is too good to wash withal, and therefore I leave it out here, and put in blew Bife, which will very well serve in the stead of it, and indeed you may leave out both, and use Smalt in the stead of them, but that it will not work so well as Bife; now Bife is too good to use upon all occasions, but only when you intend to bestow some cost and pains upon a piece, otherwise you may use no other blew in your work, than blew Verditer, with which you may make a pretty good shift without any other blew. I mean in ordinary work.

2. Indico is a dark blew, and is used principally to shadow with upon your other blew. Indico and Yellow-berries mixed together make a dark green to shadow other greens within the darkest places.

3. Blew



The Whole figure of Mans body foreshortened
a little & scene by the Sole of the Foot, the Back upwards.

Having made the figure stretched at length by the Side the back upwards You must also observe the measures as appeared in the level line 1-2-3-4-5-6-7-8 and find up the said measures and proportions by the Diagonal lines upon the perpendicular which approach the Foreshortened figure and the Shadow of the afore said figure scene alike. Now to make the figure of the Shadow you must draw a Line slopingly in 5 mull of 3 figures & drawing 5 proportion to measure marked 1-2-3-4-5-6-7-8. The first marked 1 for 5 is the second 2 for 5 should be and so consequently of the rest unto 5 eighth measure. And to make 5 shadow as 1/5's some joined directly upon the Back and to make the draught you must divide perpendicular lines proceeding from the figure stretched at length & scene a side by the corresponding intersections of which and of level lines the foreshortened lines and parts of the same scene by 5 Sides of the feet the back upwards is described as appeared in the shadow drawing of this present figure.

3. Blew Verditer is a very bright pleasant blew; and the easiest to work with in water: it is somewhat inclined to green, and being mixed with yellow-berries, it makes a good green; this blew is most used.

4. Verdigreece is a good green, but subject to decay; when it is dry upon the paper it will be of a lighter colour than it was when you lay it first on, therefore to preserve it from that fault, put some sap green amongst it to dissolve in it, and it will make it keep its colour; this colour is of a poysonous nature, and therefore you must be careful how you use it, that it come not near your mouth. There is distilled Verdigreece to be bought at the Colourshops, that is a far better green than the other, but it is somewhat dear, and the other will serve instead of it.

5. Verditer green is a light green, seldom used in any thing but in colouring of Landskips, those places that should shew a far off, and it is good for such a purpose, because it is somewhat inclining to a blew, but you may make a shift to do any thing well enough without it; for a little blew Verditer, mixt with Copper Green, and a little white will make just such another Colour.

6. Sap green is a dark dirty green, and never used but to shadow other greens in the darkest places, or else to lay upon some dark ground behind a Picture, which requires to be coloured with a dark green, but you may make a shift well enough without this green, for Indico and Yellow-berries make just such another colour.

7. Copper green is an excellent transparent green, of a shining nature, if it be thickned in the Sun, or upon a softly fire, and it is most used of any green in washing of Prints, especially in colouring of the Grass, Ground, or Trees, for it is a most perfect Grass-green.

8. Vermilion it is the perfectest scarlet colour, you need not grind it, no nor wash it, it is fine enough of it self, only temper it with your finger in a Gally-pot or Oyfter-shell, with Gum-water, and it will be ready for your use, if you put a little Yellow-berries amongst it, it will make it the brighter colour; this is principally used for garments.

9. Lake, it is an excellent Crimson colour, with it you may shadow Virmillion, or your yellow Garments in the darkest places; with it you may make a Skie colour, being mixed only with white; with it you may make Flesh colour, sometimes mixed together with the white and a little read-lead, it is of an excellent colour it self to colour Garments, or the like. Indian Lake is the best lake, but too good to be used to wash Prints with, unless you intend to bestow great curiosity upon your work, but the best sort of ordinary lake will serve well enough for ordinary uses, but that also will be somewhat costly.

Therefore instead thereof you may use red Ink thickned upon the fire, and it will serve very well for your porpouse, and better than lake, unless it be very good.

Note, if you would make a light Skie colour of your red Ink, you must not thicken it, or if you would mix it among your flesh colour you must not thicken it, you should rather chuse to shadow your Vermillion with Spanish brown than thick red Ink, which will serve well for that purpose and is much cheaper, but it is not altogether so bright a colour and clear.

10. Red-lead is the nearest to an Orange colour, and putting a little yellow berries into some of it, it will make a perfect Orange colour, but if you mean to make flesh colour of it, you must put no yellow, but only then when you would make an Orange colour. This colour is used for the colouring of Buildings, or High-ways in Landskips, being mixed with a little white. Also it is the only bright colour to shadow Garments with, to make them shew like changeable Taffety; it is good also to colour any light ground in a picture, taking only the thin water off it and so for several other uses, as you shall see occasion for it.

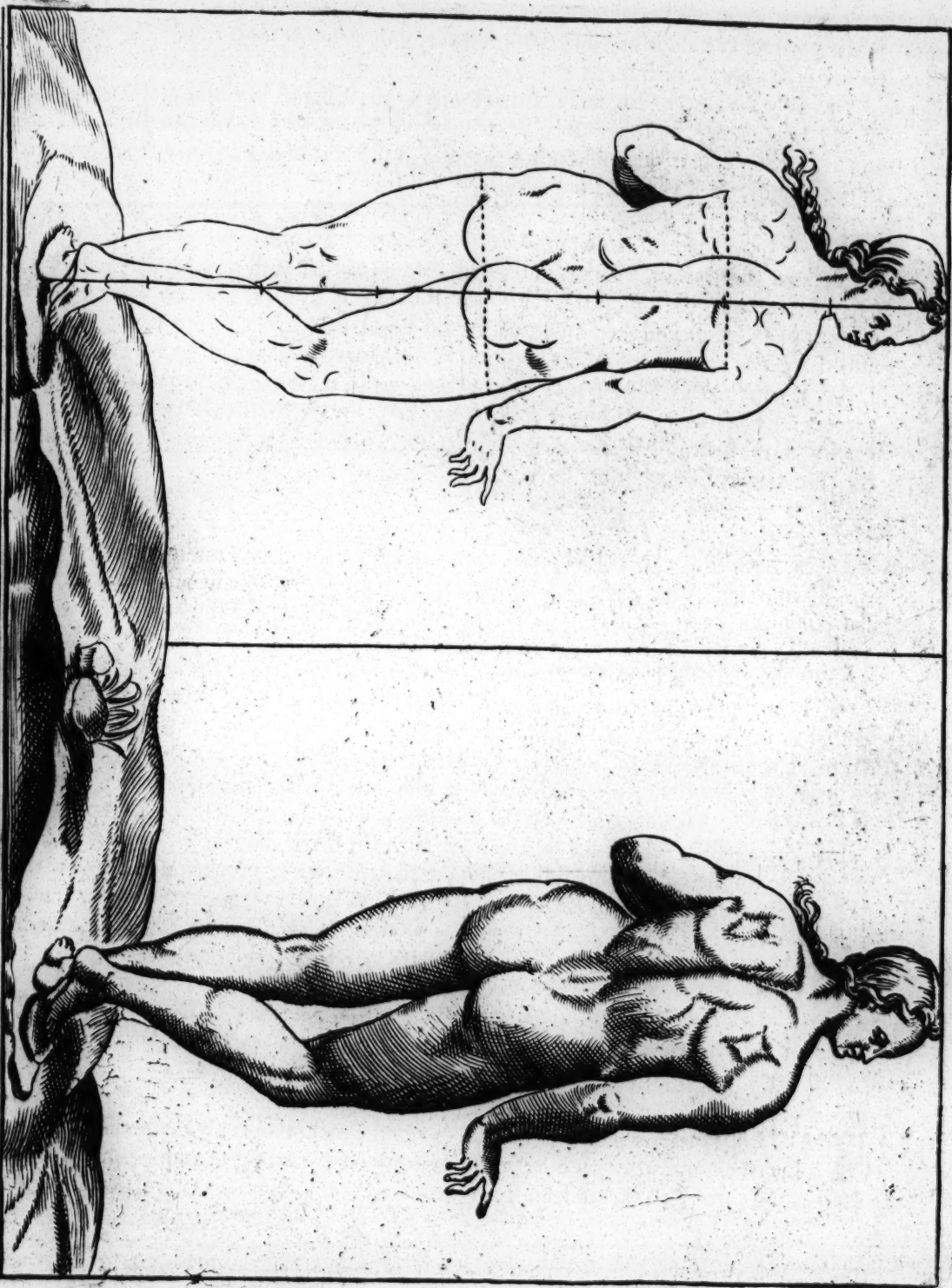
11. Yellow-berries, it is most used in washing of all other colours, it is bright and transparent, fit for all uses, and is sufficient without the use of any other yellow.

12. Saffron is a deep yellow, if you let it stand a pretty while; it is good principally to shadow yellow-berries with, instead of Red-lead, and it is somewhat a brighter shadow, but you may make shift well enough without this colour, for Red-lead and Yellow-berries make just such another colour.

13. Light Masticote; it is a light yellow, just like yellow-berries and white, and therefore you may shift well enough without it, only for the saving your labour to mix your yellow-berries with white, when you have occasion for a light yellow, which you may sometimes make use of to colour a light ground in a Picture, and then shadow it with the water of burnt Umber, or Red-lead, that is the thinnest part of the colour.

14 15. Ceruse, it is the best white, if it be good and finely ground ready to your hand, as you may have it at some Colour-shops, for want of it buy white-lead pickt to your hand, either of them will serve well enough; any of these being mingled with another colour, they make it lighter, and the more you put, the lighter they will be, as you shall find in the using of them.

16. Spanish-brown is a dirty brown colour, yet of great use, not to colour any Garment with, unless it be an old Mans Gown, but to shadow Vermillion, or to lay upon any dark ground behind a Picture, or to shadow yellow-berries in the darkest places, when you want Lake, or thick red Ink



The proportion of a woman standing backe; The same manner as you make the former figure, you may use in this
 backward of the woman, without altering any thing of the measure, except in observing the muscles, which are
 marked behind must be made sweeter & smoother then the mans, as appears in this figure.

17. It is the best and brightest colour when it is burnt in the fire till it be red hot, but if you would colour any Hare, Horse, Dog, or the like, you must not burn it, but for other uses it is best when it is burnt; as to colour any wooden Post, bodies of Trees, or any thing else of wood, or any dark ground in a Picture; it is not to be used about any Garments unless you would colour many old Mens Gowns, or Caps standing together, because they must not be all of one colour of black, therefore for distinction and varieties sake you may use Umber unburnt for some of them.

18. Printers black is most used, because it is the easiest to be had, and serves very well in washing: Note, you must never put any black amongst your colours to make them dark, for it will make them dirty, neither should you shadow any colour with black, unless it be Spanish-brown, when you would colour any old Mans Gown, that requires to be done of a sad colour; for whatsoever is shadowed with black will look dirtily, and not bright, fair and beautiful.

19. Ivory burnt or for want of that bone burnt, it is the blackest black that is, and it is thus made; take Ivory, or for want of it some white bone, and put it into the fire till it be thorowly burned, then take it out and let it cool, and so slit in the middle, and take out the blackest of it in the middle, and grind it for your use.

How to make a curious Colour of East India red Cakes.

TAKE a piece of a red Cake, and put it into an Oyster shell or a Musle shell, that is washt very clean, and put to it a little fair water, just enough to wet it all over, and so let it lie about a quarter of an hour; and then squeeze it hard against the shell, or wring it out between your fingers, and there will come out a most excellent transparent colour, which will serve very well instead of Lake, if your red Cake be good, the best choice you may have where this book is sold. Note that there is a great many of them are counterfeit, and good for little, which you may easily know, by cutting into them a little way with your knife, which if they be good, they are as red within as they are without, if bad, they look very pale and whitish within.

Directions for the mixing of your Colours.

1. **I**N mixing of any colour, you must be very careful you make it not too sad; if one colour be sadder than the other that you mix with it, put in but a little and a little of the sad colour, till you see it be sad enough for your purpose, for if you make your colour too sad, you will very hardly recover it in mixing, and if you lay it so on your Picture, you can never recover, but if it be too light you may make it darker at your pleasure.

2. In mixing your colours you must be very careful that you put not your Pensils out of one colour into another, for that will spoyle and dirty all your colours, unless you wash your Pensils clean, and then wipe the water out of them.

3. Black is not to be mingled with any colour but white, for it dirtieth all other colours, and makes them look unpleasant.

4. You should, when you mix any colours, stir them about with your Pensil, that so you might stir up the colour, and might not take the thin water only to mix, nor yet the bottom only, but the water being well coloured pour it out into a shell, and then stir the other colour in like manner, and so mingle them together; you should pour out the lightest colour first, that so you might the better know what quantity of the sadder will serve your turn.

Particular directions for the compounding of Colours, or mingling one Colour with another.

How to make a Purple colour,

TAKE Log-wood, and seeth it in Vinegar and small beer, in an earthen Pot, and put a little Alum therein, untill you taste it to be strong on your tongue, and when it is boyled, strain the Log-wood through a clout, clean from the water, and so let the water stand and cool for your use.

O R,

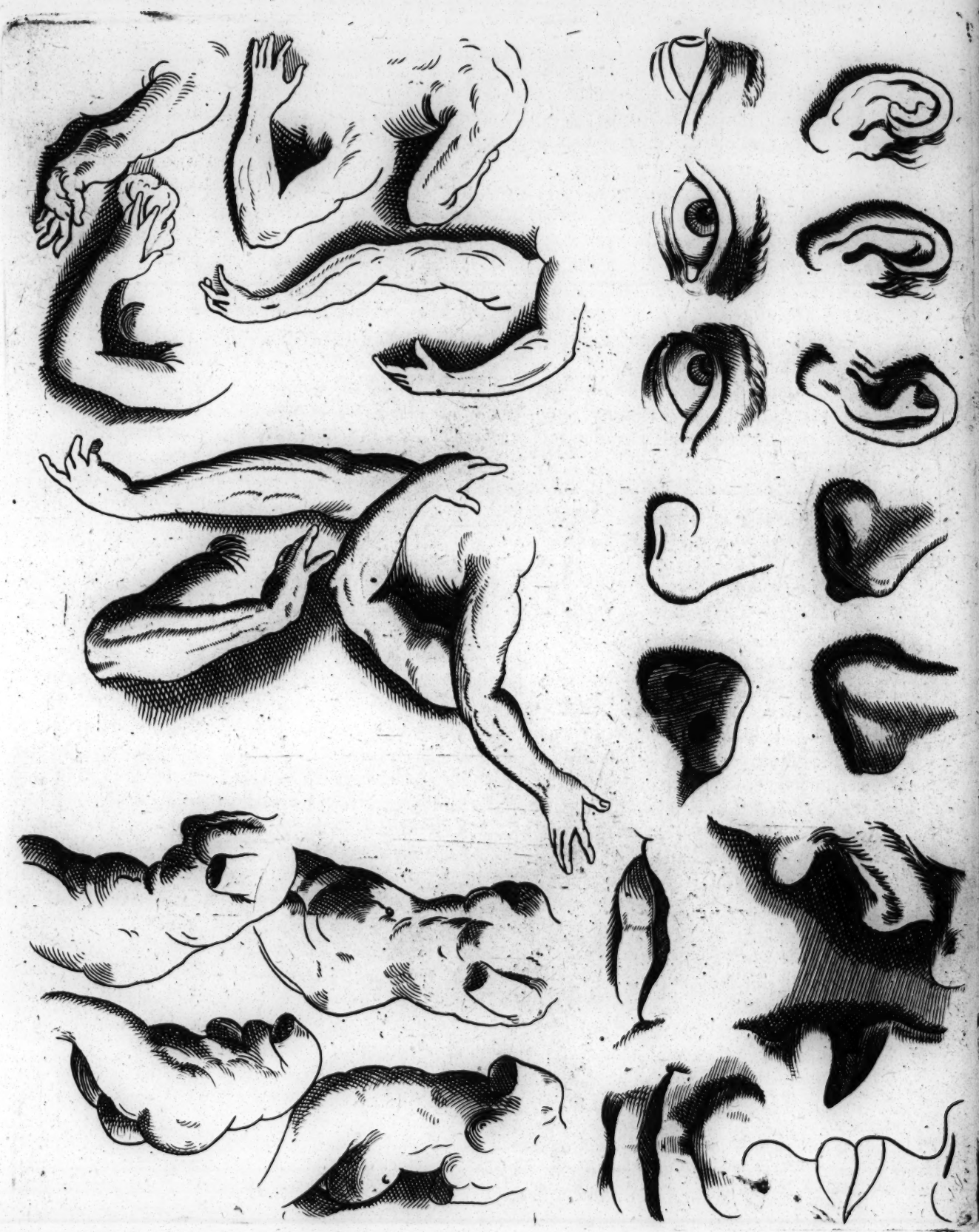
YOU may make purple colour with mixing Bise and Lake together, or if you want Bise, you may use blew Verditer, but it will not serve your purpose so well as blew Bise, but thick red Ink will serve at all times as well as Lake in washing.

How to make red Ink.

BOIL Brazil as you do the Log-wood and strain the Brazil through a clout, as before.

A Flesh Colour.

IT is made of white and a little Lake, and a little Red-lead mixed, a very small quantity of each; you may make it as light, or as red as you please, by putting more or less white in it; shadow



shadow in the cheeks and other places, by putting in a little more Lake and Red-lead into it, if you would have it a swarthy complexion to distinguish the mans flesh from the womans, put a little yellow Oker among your flesh, and for your shadow put a little more Lake, and a small quantity of burnt Umber.

An Ash-colour is compounded of black and white.

You may make your greens lighter by mingling it well with yellow-berries or white.

Colours for Buildings.

IN washing we do not observe the natural colours of every thing, as to express variety of colours and pleasantness to the sight, that things coloured may appear beautiful to the eye, yet so as they may not be contrary to reason, and be accounted ridiculous; but that we do somewhat imitate natural things, and here and there add some beauty by pleasant colours, more than do usually and commonly appear in the natural things themselves, so that although the natural things themselves do very rarely appear in such beauty, or with such kind of colours, yet it may be imagined, that it is possible, that at sometimes they do or may be made (without derogating from the rule of nature and reason) to appear in such colours, as you have expressed them in by this rule, you may guide your self in colouring of any thing, principally in Buildings and in Landships, therefore when you would colour any Buildings, you must do it with as much variety of pleasant colours as the utmost extent of nature and reason will permit, yet not without reason, or beyond the limits of nature.

In colouring Buildings you may sometimes use black and white for the Wall, Conduits or other things, where you think fit sometimes; you may use red-lead and white for brick houses or others; when many houses stand together you must colour them with as many various colours as you can well use about Buildings; sometimes you may use Umber and white, and sometimes Lake and white, or red Ink and white, for varieties sake, and if you want more variety, you may put here and there, in some places Verditer and white, all these you must shadow after you have laid them on.

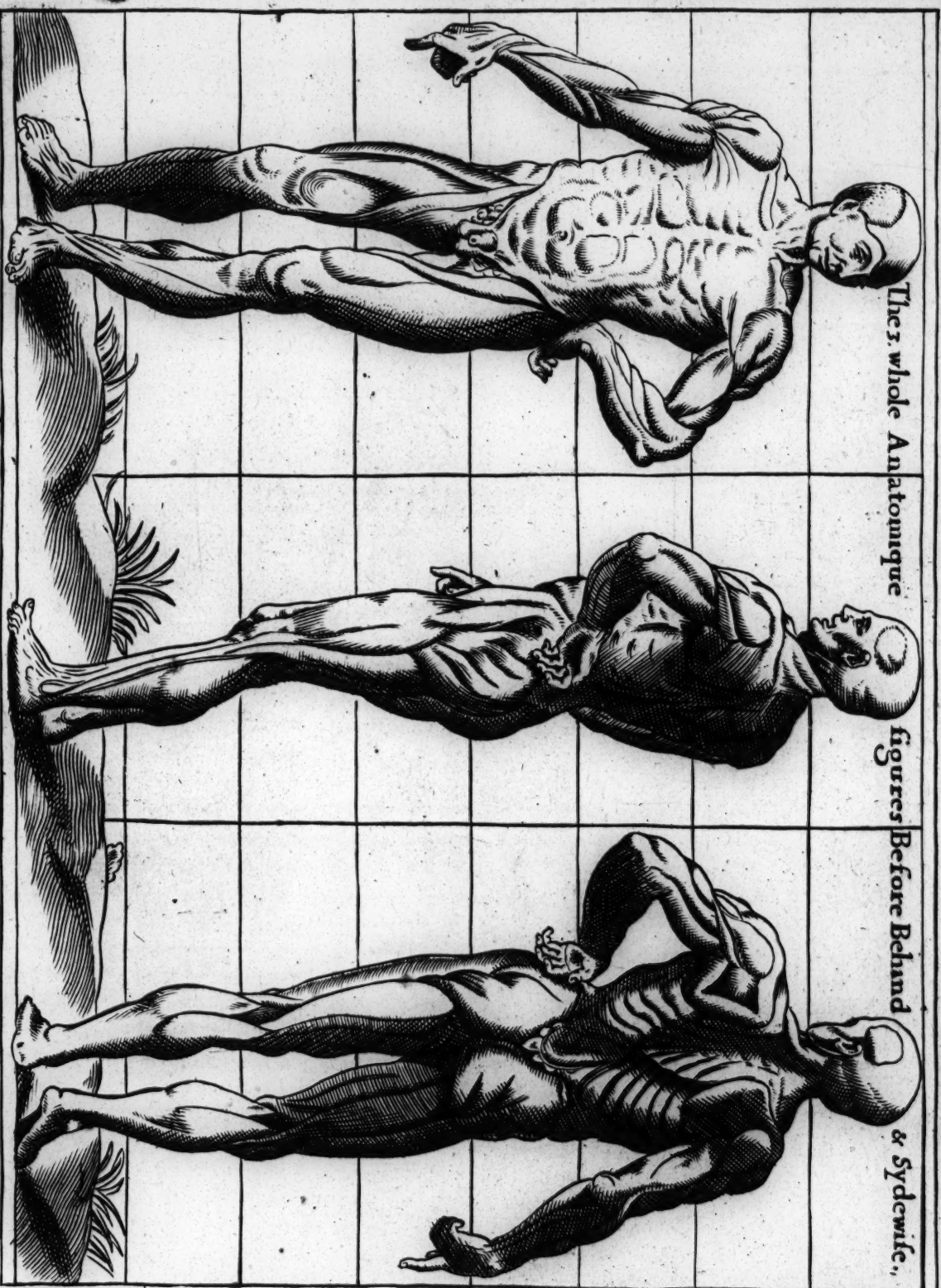
Colours for Landships.

FOR the nearest and darkest saddest hills lay burnt Umber, and for the light places you sometimes put some yellow to your burnt Umber, for the next hills lay Copper-green well thickened with the fire, or in the Sun; in the next hills further off, mingle some yellow berries with your Copper-green, and let the fourth degree be done with green Verditer, and the furthest faintest places with blew Bise, or for want of that with blew Verditer mingled with white, for the lightest places, and shadowed with blew Verditer in the shadows, somewhat thick: the highways must be done commonly with red-lead and white, for variety you may use sometimes yellow Oker, and shadow it with burnt Umber, which colour you may use also for sandy Rocks and Hills: the Rocks must be done with various colours, in some places with black and white, in some places with red-lead and white, and some must be done with Umber and white, and some with blew and white, and other colours, such as you think do nearest resemble Rocks, but always endeavour to do them with pleasant colours, as much as you can; the water must be done with black Verditer and white, sometimes shadowed with Copper-green, a little blew Verditer, when the banks cast a green shade upon the water, at other times it must be shadowed with blew Verditer alone, and where the water is very dark in the shadows, it must be shadowed with a little Indico, some Copper-green thickened, and some blew Verditer: the bodies of Trees must be done with burnt Umber, and the leaves must be done with such greens as the ground is, and the whole Landship must be shadowed, after you have laid on the first colours, the darker greens must shadow the lighter, Spanish brown then must shadow red-lead and white, and so the others as before.

Colours for the Skie.

Light Masticate, or Yellow berries and white, for the lowest and lightest places red Ink not thickened, and white for the next degree, blew Bise and white for the next degree, and blew Bise alone for the highest of all; instead of Bise you may use Verditer, all these must be so laid on, and wrought one into another, that you may not receive any sharpness in the edge of your colour, but that they may be so laid on, that you cannot perceive where you began to lay them on, they must be so drowned one into another.

For Cloud colours, you may use sometimes blew Verditer, and white shadowed with blew Verditer, sometimes light Masticate shadowed with blew Verditer, and sometimes Lake and white, or red Ink and white, shadowed with blew Verditer.



In these three whole Anatomiques, are represented the Muscles of the Body as Sydewife. And the said Figures are made by such observations and measures as
 is before them directed. And you may note that the draught of the Figure for before serveth also for the Figure Behind so as in each for that in the making of the one you
 also have made the other taking the opposite of the Draught and the right spaces which are between the mynnyers are the right measures and proportions of the
 7. Head which are to be observed in Humane bodies.

What shadows must be used for every colour in Garments.

TAKE this general rule, that every colour is made to shadow it self, either if you mingle it with white for the light, and so shadow it with the same colour unmingled with white, or else take off the thinnest water of the colour for the light, and so shadow it with the thickest bottome of the colour ; but if you would have your shadow of a darker colour, then the colour it self is, to shadow the deepest places with, then follow these directions.

1. Blew Bise is shadowed with Indico in the darkeſt shadows.
2. Indico is dark enough to make the darkeſt shadow, therefore needs no other colour to shadow it withall.
3. Blew Verditer is shadowed with thin Indico.
4. Verdgreece with ſap green.
Verditer with Copper green, and in the darkeſt places of all with ſap green.
5. Sap green is uſed only to shadow other greens, and not to lay for a ground in any Garment.
6. Copper green is shadowed either with Sap green, or Indico and yellow berries.
7. Vermillion with Lake, or thick red Ink, or Spaniſh brown.
8. Lake muſt not be shadowed with any colour, for it is the darkeſt red of it ſelf, but for variety you may shadow it ſometimes with Biſe, or blew Verditer, which makes it ſhew like a changeable Taſſety.
9. Red lead is shadowed with Spaniſh brown in the darkeſt places.
10. Yellow berries, the natural shadow for it is Umber, but for the beauties ſake it is ſeldome shadowed with Umber, but ſometimes, and moſt commonly with red lead, and the darkeſt touches with thick red Ink, or Spaniſh brown, ſometimes for varieties ſake it is shadowed with Copper green thick, and ſometimes with blew Biſe, or blew Verditer, and with any other beautiful colour.
11. Saffron is shadowed with thick red Ink or Lake.
12. Light Maſticote, with the thin water of Red-lead.
- 13, 14. White Ceruſe, and white Lead with a little black amongſt ſome of it mingled.
15. Spaniſh brown with black, but that is not uſed in any bright Garment.
16. Umber with black mingled with ſome of it.
17. Black cannot be shadowed with any colour darker than it ſelf.

Directions for the laying of your Colours.

1. **Y**OU muſt lay your colours on of ſuch a thickneſs, I mean your bodied colours, that you may ſee how to shadow them, to perceiue where the shadows are, and not lay on your colour ſo thick that you cannot perceiue the print, nor how and where to shadow it.
2. You muſt always lay on your lighteſt colours firſt, and then shadow them afterwards.
3. You muſt lay on your colours very ſmooth with your Penſil, that the colour may not lie thicker in ſome places than in other, and to that end you ſhould take your Penſil pretty full of colour when you ſhould cover a Garment all over, (otherwiſe nor) that ſo you may lay the colour ſmooth before it dry, for you cannot well ſmooth them afterwards, when they are once dry ; therefore, when you lay them on, be as quick as you can in covering the Garment, that you may have covered it all over before your colour be dry in any part, for by this means you ſhall be the better able to lay it ſmooth ; ſome colours are harder to lay than others ; thoſe that are the moſt ſandy colours, as Verditer, Biſe, Red-lead, &c. are hardeſt to lay ſmooth on, and therefore you muſt be the more careful in them.

What colours ſet off the beſt together.

1. **B**LEWS ſet off well enough with reds, yellows, whites, browns, and blacks.
They ſet off beſt with reds, whites and browns.
They ſet not off well with greens and purples.
2. Greens ſet off well with purples, reds, yellows or browns.
They ſet off beſt with purples and reds.
They ſet not off well with blews or blacks, nor whites unleſs it be a ſad green.
3. Reds ſet off well with yellows, blews, greens or whites.
They ſet off beſt with yellows and blews.
They ſet not off with purples, browns, or blacks.
4. Yellows ſet off well with reds, ſad blews, greens, browns, purples.
They ſet off beſt with reds and blews.
They ſet not off well with light greens, or blacks, or whites.
5. Whites ſet off with all colours.
They ſet off beſt with black and blew.
6. Browns ſet off very well with no colour, but are uſed ſometimes upon neceſſity ; they ſet off worſt of all with black, becauſe they are ſo near alike.

7. Blacks



7. Blacks are not used but upon necessary occasions in some things that do needfully require it; and so it sets off well enough with almost any colour, because it is not like any, but differs somewhat from all.

How to write Gold with a Pen or Pensil.

TAke a shell of Gold, and put a little Gum-water into it, and so stir it about with your Pensil, but you must put very little Gum-water; and then you may use it as you do other Colours. Thus by a little practise you may become perfect in this Art, and learn the full perfection of it.

How to lay Gold or Silver on Gum-water.

TAke five or six leaves of Gold or Silver, and grind them with a stiff Gum-water, and a pretty quantity of Salt, as fine as possibly you can, then put them into a Jar glass, and fill the Glass almost full of fair water, to the end the stiff water may dissolve, and so the Gold go to the bottom, let it stand three or four hours, then pour away the liquor from the Gold, and put in more clean water, and stir it about, and let it settle again, and then pour the same water to this, so often, until you see your Gold or Silver clean washed: then take a clean water, and put thereto a little piece of Sal Almoniack, and great Salt, and let it stand the space of three days in a Box made of Wax, or in some close place: then take a piece of Glovers Leather, and pick away the Skin side, and put the Gold and the water therein, tie it up, then hang it on a pin, and the Salt will fret through, and the Gold will remain, which you shall temper with the glair of an Egg, and so use it with Pen or Pensil.

You must diaper on Gold, with Lake or yellow Oker, put on Silver with Ceruse.

Let your Gum-water be made good and stiff, and lay it on with your Pensil, where you would gild, then take a Cushion that hath a smooth Leather, and turn the bottom upward, upon that cut your Gold with a sharp Knife, in what quantity you will, and to take it up, draw the edge of your Knife finely upon your Tongue, that it may be only wet, with which do but touch the edge of your Gold, and it will come up, and you may use it as you list, but before you lay it on, let your Gum be almost dry, and being laid, press it down hard with the Scut of an Hare, afterwards burnish it with a Dogs tooth.

Of Limning.

Limning consisteth not only in the true proportion of a Picture, but also in the neat and lively colouring of the same, whereby the work is exceedingly graced, and most lively set out in proper Colours, most nearly resembling the life.

How to chuse your Pensils.

Let them be clean and sharp pointed, not cleaving in two in the hair, they must be full and thick next the quill, and so descending into a round and sharp point, if you find any one hair longer than another, take it away with the flame of a Candle, passing the Pensil through the flame, you must have several Pensils for several Colours.

Gum Araback.

Amongst all your Colours you must mingle Gum-Araback, the best and whitest which you should have always ready, finely powdred (or dissolv'd in fair water) and so with a few drops of pure water, mingle it with your Colour, and temper them together till the Gum be dissolved and incorporated with the Colours.

How to grind your Colours.

You must grind your Colours either upon a porphire, Serpentine, or pebble stone, which are the hardest, and therefore the best to grind upon; grind them with fair water only, without Gum, and when you have ground them very fine, put them upon a chalk-stone, and there let them dry, and when they are dry, take them off from the chalk and reserve them for your use, in Papers or Boxes.



The Names of your Colours.

Whites.	Yellows.	Greens.	Blews.	Browns.	Reds.	Blacks.
<i>Ceruse.</i>	<i>Masticote.</i>	<i>Sap green.</i>	<i>Indico.</i>	<i>Umber.</i>	<i>Indian Lake.</i>	<i>Cheristone burnt.</i>
<i>White-lead.</i>	<i>Yellow Oker.</i>	<i>Pink and blew.</i>	<i>Ultramarine.</i>	<i>Spanish brown.</i>	<i>Red-lead.</i>	<i>Ivory burnt.</i>
	<i>English Oker.</i>	<i>Bife.</i>	<i>Blew Bife.</i>	<i>Cullins earth.</i>	<i>Red Oker.</i>	<i>Lamb-black.</i>
		<i>Green Bife.</i>	<i>Smalt.</i>		<i>Indian Red</i>	
		<i>Cedar Green.</i>			<i>Cakes.</i>	
		<i>Verditer.</i>				

What Colours must be washt, and what ground.

	Ground.	Washt.
<i>Ceruse.</i>	<i>Umber.</i>	<i>Red-lead.</i>
<i>White-lead.</i>	<i>Spanish brown.</i>	<i>Masticote.</i>
<i>Indian Lake.</i>	<i>Colens earth.</i>	<i>Green Bife.</i>
<i>English Oker.</i>	<i>Cheristone black.</i>	<i>Cedar green.</i>
<i>Pink.</i>	<i>Ivory black.</i>	<i>Ultramarine.</i>
<i>Indico.</i>		<i>Blew Bife.</i>
		<i>Smalt.</i>
		<i>Verditer.</i>
		<i>Sap-green is</i>
		<i>to be steep</i>
		<i>in water.</i>

How to wash your Colours.

TAKE some blew Bife or other colour you would wash, and put it into a dish full of pure water, stir it for a while together, till the water be all coloured, then let it stand a while, and the corruption will fleet upon the water, then pour away the water, and fill the dish with fresh water, and stir it as before, till the water be troubled and thick; which done, before it be half settled, pour it out into another dish, leaving the dregs and seethings of your colour in the former dish, which you must cast away; the troubled and coloured water being poured into your second dish, put more water to it, and wash it as before, then let it settle till it be clear, and so pour off the water, washing it again and again, if any scum arise which may make four or five sorts, still pouring half the thin water into another dish, and washing it as aforesaid; when you have washed it often, and find it well cleansed, pour away the water, then set the colour in the Sun to dry, and when it is dry, strike off the faintest part of the colour, lying about the sides of the dish with a feather, and so use it for your finest work, the rest will serve well for courser work.

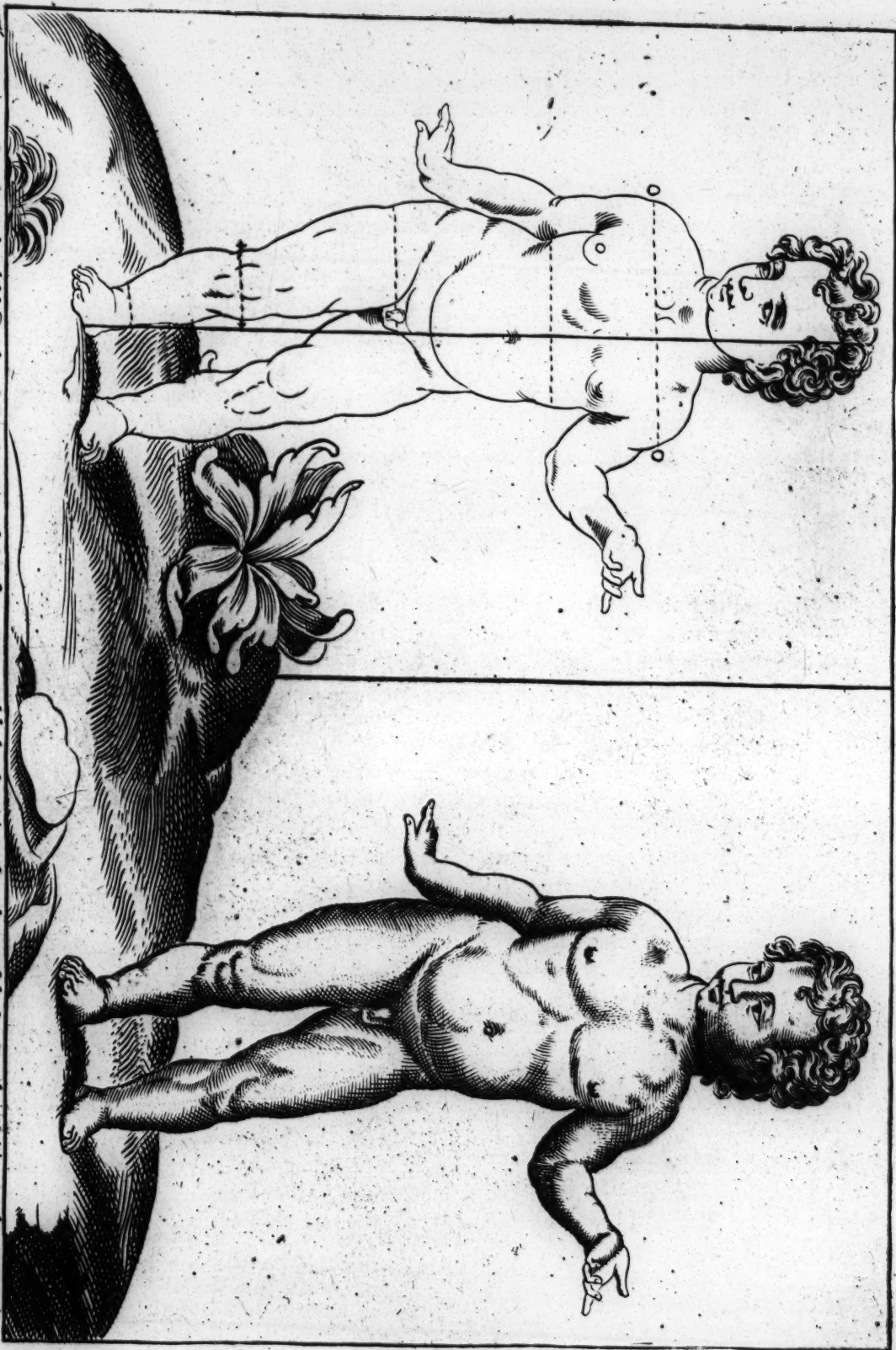
When you would use your colour, take of it as much as you can well spread about the sides of a shell, somewhat thin, and not on heaps, and so temper it finely with your gum as before.

To avoid the cracking of your colour, and flying from the shell, to which some colours are subject, take a little fine powder of white Sugar-candy, and with it and a little safer water, temper the colour over again with your finger till the Candy be dissolved.

Colours for Garments.

To make a	Grass green is made of Pink and Bife, it is shadowed with Indico and Pink.		
	Popinia green of Indico and more Pink, shadowed with Indico.		
	French green of Pink and Indico	_____	Indico
	Sea green of Bife Pink and white	_____	Indico
	Carnation of Lake and white	_____	Lake
	Crimson and Vermilion Lake and white	_____	Lake
	Scarlet, Vermilion	_____	Lake
	Purple, Bife, Lake and white	_____	Lake and Indico
	Violet, Bife and Lake	_____	Indico
	Yellow made of Masticote, Pink and Saffron shadow with Lake and Saffron.		
	Straw colour, most Pink, Saffron, white and Vermilion	_____	Lake
	Orange Tauny, Vermilion, Pink and Masticote	_____	Lake
	Ash colour, Lamb black and white	_____	Black
	Skie colour, Bife and white	_____	Bife
	Light hair colour, Umber, yellow Oker and white	_____	Umber
	Sad hair colour, Umber, Oker and Black	_____	Umber and Black

Thus by a little practising you may learn to mingle and compound all other Colours whatsoever.



*The proportion and measure of a child standing forward contained but five measures of the head to wit 3 from the top of the head to the privities, and two more in the thighs and legs, as appears in this figure, and the breadth between the shoulders is the length of a hand and a half, as appears by a straight prick'd line marked U, and the breadth of the body about the navel marked also with a croise prick'd line is the length of one hand. the breadth of the upper part of the thigh marked with a prick'd line opposite to the privities, is the third part of two lengths of the head, the knee marked with a small thurst prick'd line and a little * at both ends is of the just length as between the eye and chin, the small of leg and the breadth of the arm are of the thickness of the wrist.*

The manner of working.

1. **T**He manner of working in limning, is by little small pricks with a sharp pointed Pensil.
 2. You must lay your Colours on very faint at first, and so make them deeper and deeper by degrees, for if you lay it on too sad at the first, it is impossible you should well recover it to make it lighter, but if it be too light you may make it darker at your pleasure.

3. When you would work, you must first lay on flat primer, which must be of the lightest part of the complexion you intend to make, so that you may not need to heighten, or lay a lighter upon it; you make a light complexion of white and Lake, and red lead temper'd together in a shell; if it be a swarthy complexion, mingle a little fine Masticote or English Oker, or both with the complexion; having laid on the primer, which you must do very quick and smooth, then draw the features after the primer is dry with Lake and white very faintly, and so proceed to the perfecting of it by degrees.

Colours for the Face.

FOr the red in the cheeks, lips, &c. temper lake, red lead, and a little white together, for the faint shadows that are blewish, Indico and white together, for Bise is not used in a Face, nor any black; for the deeper shadows take white English Oker and Umber, and for dark and hard shadows in many Pictures, use Lake and Pink mixt with Umber.

When you are come to the close of your Picture, and have almost finisht your Face, you must in the last place do all the Scars, Molds, smilings and glancings of the Eye descending and contracting of the Mouth, all which you must be sudden to express with a bold quick and constant hand.

Thus by a constant practise joyned with these directions and your own industry, you may in time attain to a great measure of Perfection in this Art of Limning.

*Be patient, thou that seekest for this skill,
 By grace and Art, so mayest thou have thy will.*

How to Paint Pictures upon Glafs.

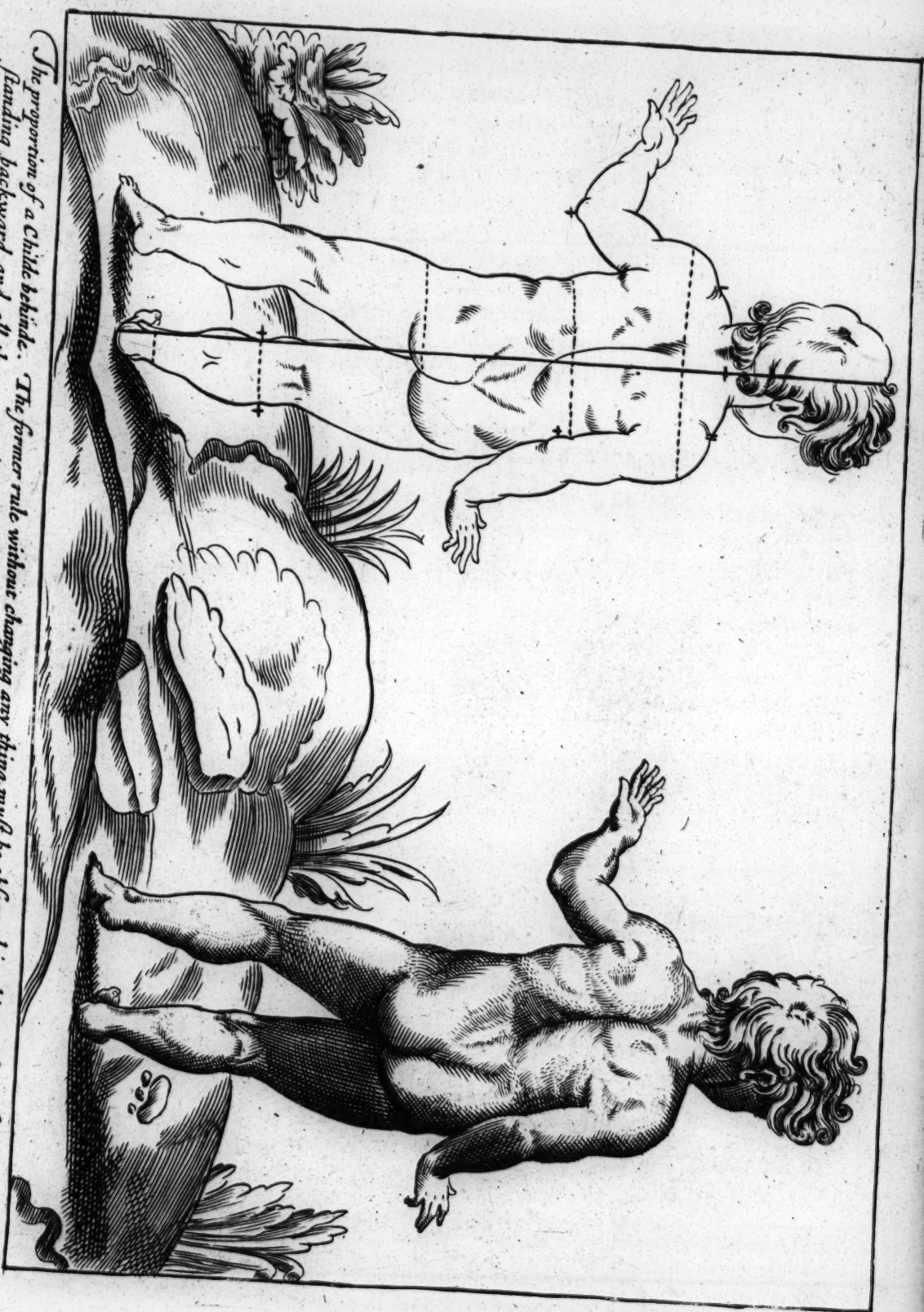
Take a Print done in Metzo Tincto (the best choice of which you may have where this Book is sold, viz. at the Print shop next the Exchange Staires in Cornhill) lay the Print in Water in a Skillet, or any other Vessel, and let it boyl over a gentle fire about two or three hours, but if the Paper be very thin, it need not boyl so long; and against the Print is boyled, which you may perceive by its sinking to the bottom, then take a piece of Looking-glass Plate, or a piece of the whitest French Glass, and set it against the fire to keep it warm: Then take a little Venice Turpentine, and set in a Gally-pot on the fire to make it liquid: Then having taken your Print out of the boyling Water, lay it between two sheets of Paper, till you with a pretty large Pensil lay the Venice Turpentine all over the Glass, which must be laid very even: Then the right side of the Picture lying uppermost, lay the Glass upon the Print; then lay a piece of paper upon the Print, and smooth it down with the palm of your hand so long, till it stick close all over without having any blister upon it. And then rub the backside of the Print with your fingers, and you will find the paper to rowl off, which you must rub so long, till you find but as it were a thin skin of the Picture to remain upon the Glass; but you must be sure to take care that you do not rub holes in the Picture. And after it is dry, you must varnish it over once with some white varnish, by which means it will appear very transparent; and so paint it with Oyl Colours, as your fancy shall direct you.

Another way to prepare the Picture without boyling in hot Water.

Take a Print done in Metzo Tincto, and lay it in a Tray or any other thing wherein it may lye smooth, and put in so much water as may cover it all over, and let it lye in the water two, three or four days, till the Picture sinks to the bottom, and it seems to be rotten, and then prepare your Glass and order the Print, as is in the former direction.

Another way of Painting Metzo Tincto Pictures without Glafs.

Take a small straining frame, and having your Print just wet all over with a Linnen rag, or a Sponge; paste that side of the straining frame you design to stick your Picture upon, and paste also the Margent of the Print, and so stick the Print upon the straining frame; straining it as smooth as you can, and then after the Print is dry, take some Spirit Varnish (which you may have at the Print shop at the Exchange) and with a pretty large Pencil, varnish the Print all over on the backside, and about an hour after, the Varnish being dry, varnish it over again, and so about three or four times over, and varnish it once over on the right side of the Print; by which means you will see it look very transparent; and then colour it with Oyl colour, as you shall think best.



The proportion of a Child behind. The former rule without changing any thing, may be observed in this present figure, standing backward, and all the proportions and measures which are observed in the former, serve to this likewise.

To make a double Size, or bottom, to lay or settle Silver or Gold upon, called an embossed ground.

TAKE Venice Cercuse, White-lead, the Plaister of an old Image or Chalk, any of these made in fine Powder, and then ground with the glair of an Egg, and a little water, on a Painters stone, maketh a good bottom to lay under Silver. But when you shall use any of them to lay under Gold, do to it a little Saffron, therewith to make it somewhat Yellow, but beware you put not too much water thereto, for then will it be over-weak, and if you do overmuch glair to it, then will it be over stiff, therefore mingle it with discretion, and look thy size be thick standing, and set thy size, thus tempered and covered, in a horn or a shell in some Celler or shadowed place, or under the earth, where it may stand moist for the space of seven days, until it be perfect clammy and rotten, and every day once stir it about, and you shall well understand, that all the sizes, the elder they be, and the more clammy and rotten they be, the better they be, for all the craft is in well making and tempering of the size, and if there stand any bells upon the size, put in ear wax, for it is a remedy therefore; and before you lay it on your work, first lay the size on a scrow and dry it, and when it is dry bend it, and if it bend and break not, then it is good and perfect; and if it break, put thereto a little water to make it weaker, and prove if it cleaveth fast to the book, and if it do not, then put glair thereto, and make it more stedfast. The like size may you make with Gypsum, boole Almoniack, red or yellow Oker, Orpiment or Masticote, with brown of Spain, or with Red-lead, if every of them be ground by himself, and tempered, and ordered in like manner and form above written.

To make a thin Size, or bottom, to lay or settle Silver or Gold upon, called a single ground.

TAKE the new shreds of Glovers Leather, or of new Parchment, for that is best, and seeth them in fair water from a quart to a pint, that the Liquor be somewhat thick and clammy between your fingers, then strain the liquor from the shreds, and put it, being hot, in some stone Vessel, and so work it forth before it be cold, and when you lay on Silver or Gold, see that your size be neither too moist, nor too dry, but in a mean between both, for dread of impairing your work. The like size may you make (without heating them at the fire) of glew water made of parchment glew, for that is best, or with water gummed somewhat thick with Gum Arabeck, or of good old glayr, or with the Milk of green figs alone, or with the Milk of Spurge or of Wartwade, or with the Yellow Milk of Green Salendine, or with the juice of Garlick, Onyon heads, or water and grease of Snails. Upon every of these may you lay your leaves of Silver or Gold, having regard that your ground be neither too moist nor too dry, when you shall lay or settle the same thereupon.

To lay a double Size on Letters or upon other things.

YOU shall, with a Pensil made of grey aimes or Caliber tails, lay on thy size somewhat substantially, or if thou wilt, first thin, and after thicker, and then dry it, and when it is dry wet it lightly with thy spittle, and then shave it with a sharp knife, until it be even without hills, and if there fall any default therein, or else there is more in one place than in another, lay again thy size on it, and dry it and ingross it, as is said before, and when it is engrossed and made plain, then burnish it with the tooth of a Calf, of an Ox, or of an Horse, that is made therefore standing in a crooked stick, and when it is burnished and made even and shining, then it is ready to lay on it thy Gold or thy Silver.

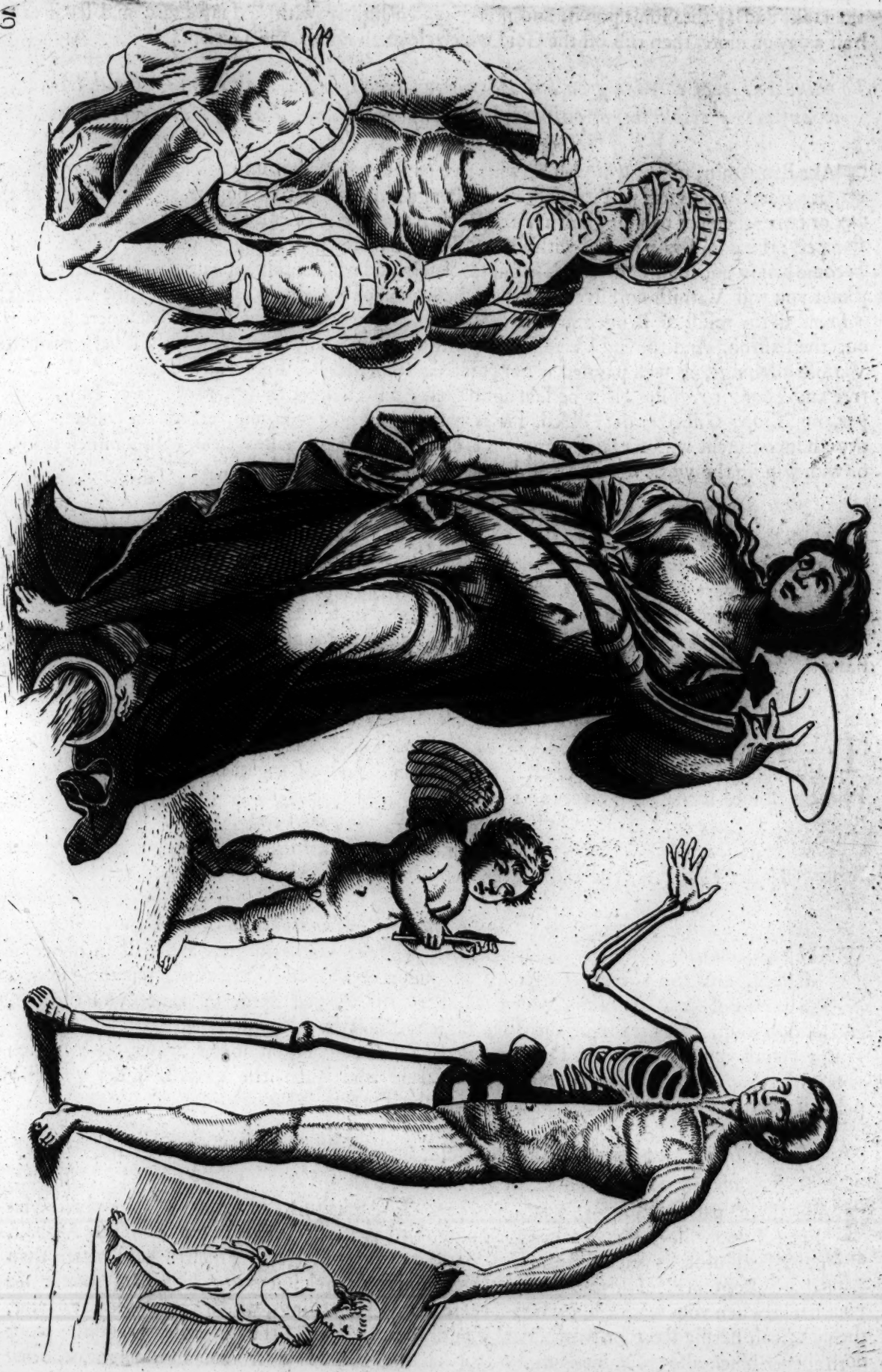
To keep whites of Eggs so long as ye will, without corrupting or putting of Arsenick to them.

TAKE the Whites of Eggs, not breaking them in any wise, but take out the Cock-treading, and put to them as much of the best White-wine Vinegar as shall suffice the quantity of the whites, leaving it so the space of two days, then pass it through some linnen Cloth without breaking or heating the whites of the Eggs, leaving it so the space of eight days, then strain it again, and put it in a viol well stopped, to occupy for the purposes above written.

To temper Brazil, wherewith to write, flourish, or Rule Books.

TAKE Brazil finely scraped, or grossly beaten to powder, and put thereto the glayr of an Egg, or Gum-water, and a little Allum made in powder, and let them steep a night and a day, and then strain out the liquor, and keep it to the use aforesaid.

The



The manner how to flourish or Diaper with a Pensil over Silver or Gold.

IF you will Diaper over Gold, take yellow Oker, and therewith draw over your Gold with a Pensil, what you will: If you will Diaper upon Silver, take Ceruse with a Pensil and draw or flourish what you will over your Silver. If you will Diaper with Gold or Silver upon colours, take the juice of Garlick, with a Pensil draw over the colours what you will, then take and lay the Gold upon it, and press it down lightly with a Hares tail, and let it dry half a day or more, then rub off the Gold which cleaveth not to the Garlick.

To make a kind of colouring called Vernix, wherewith you may Varnish Gold, Silver, or any other colouring or painting, be it upon Vellum, Paper, Timber, Stone, Lead, Copper, Glass, &c.

TAKE Bengemin, and bray it well betwixt two papers, then put it into a Viol, and pour upon it good Aqua vitæ, that it be above the Bengemin three or four fingers, and let it steep so a day or two; then put to it, for half a Viol of such Aqua vitæ, five or six chives of Saffron slenderly stamped; this done strain it, and with a Pensil Varnish therewith any thing gilded, which will become bright and shining, drying it self immediately, and will continue the brightness many years. But if you will Varnish on Silver, then take the Almon of Bengemin, that is to say, the white that is found in the midst of Bengemin, and dress it with Aqua vitæ in the aforesaid manner, leaving out the Saffron. And the said Varnish made with Bengemin and Aqua vitæ only, is very good to Varnish all things, as well painted as not painted; for it maketh Tables and Coffers of Walnut-tree and Ebony to glister; if it be laid upon them, and all other things, as works of Iron, Copper, or Tinn, Gilded or not Gilded, for it maketh bright, preserveth, aideth the colour, and dryeth incontinent without taking any dust or filth, you may make it clean with a linnen cloth, or with wiping the work with a Foxtail, the which is better.

To make Colours of all kind of Mettals.

TAKE a Bead of a Christal, or a Paragon stone, and beat each of them by himself in a brasen mortar to fine powder, then grind them dry each by himself on a Painters stone, untill the powder be very fine and small, then grind them again on the same stone, each by himself with good glayr, and lay some one of them on the work with a Pen or a Pensil, and when it is well dried, then rub it over with Gold, or with any other mettall, and you shall have the same colour that the mettall is of.

To make letters of the colour of Gold, without Gold.

TAKE one ounce of Orpiment, and one ounce of fine Christal, and beat each of them by himself to Powder in a brasen mortar. Then grind them well together with glayr upon a Painters stone, then it is perfect to write withal.

To make letters of the colour of Silver, without Silver.

Take an ounce of Tin, two ounces of quick Silver, and melt them together, and then grind them well upon a Painters stone with Gum-water, and write with it.

To make a very good hard Varnish to Varnish a Print withal.

TAKE two ounces of Gum Sandriack, the whitest you can get, and half an ounce of Mastick, and about one quarter of an ounce of Venice Turpentine, put these into a glass to a pint of spirit of Wine, which must be the highest Spirit of wine you can get, and so stop it up, and keep it in the Sun, till it is dissolved.

But before you Varnish your Picture, steep some Gum-dragon in fair water, with which you must with a hair Pensil, do over your picture, and when the Varnish is dry you may polish it over with a reed, that you may buy at the Turners.

Mr. Wenceslaus Hollar's ground for Etching in Copper or Brasse, with his directions how to use it.

TAKE three parts of Virgin wax, one part of Asphaltum, one part of the best Mastix; if you will, you may take away some third part, or thereabouts of the Asphalt, and put instead of it, as much Rosin that is transparent and clear, which I hold better than Asphaltum altogether, for this will make the ground too black; it is true you shall better see your stroke when you work, but when you are to stop some things, which you would have faint, then you shall hardly see your work, by reason of the blackness of the Asphalt, when the work doth appear black also; but the Rosin will make the ground paler and transparent, thorow which you shall see, what you do.

So then beat your Asphalt and Rosin to powder, as also the Mastix, and mingle them well together, then put your wax into a clean Pipkin, where nothing hath been before, except such ground, and set it over a gentle cool fire, and let it melt, till it beginneth to boyl, then put the Asphalt and the Mastix into it, and mingle all together till all be well melted. Then take some Porringer, or such like thing, full of clean water, and pour that boyling stuff into the water, provided that the dregs at the bottom do not go with it; then let it be cold, so as you may work it into a ball, or what you will, then take a very clean and fine linnen cloth, double or treble folded, and put into it a piece of the ground, as big as a Walnut or more, and tye it with something, till you have occasion to use it.

Now for the Copper, that must be well polished, but though it be never so well polished, you must (before you put the ground upon it) rub it over with a Coal, which must be prepared thus, *viz.*

Either burn some Charcoals, and when they are well kindled, take them and put them into cold water, they that shall sink are the best, they that shall swim are naught, and take heed, that there be no outside or Crust left on the Coal, for that will make scratches, therefore it must be well scraped off with a Knife; or burn Billets of Beech Wood, according to the former Directions, those Coals will be more gentle. And when you have rubbed the Copper with these Coals, then pour clean water over it, and let the Copper stand sloping till it be dry; then scrape some chalk upon the Copper, and rub it off with a very clean rag. That done, there must nothing touch the Copper till you put the ground on, which must be done thus, *viz.*

Put into some fire pan some small Coal (for the Charcoals are too hot) lay down the Copper over that, so as the fire may have air; then take your ground tyed up in a linnen rag and rub up and down the Copper, neither too thick nor too thin, but so as sufficiently may cover the plate, then take a feather of the wing of a Duck, or some other bird, that have stiff feathers, and so spread the ground as smooth as possibly you can, first, all one way, then cross and cross again, till it be well to your eye; and take heed all the while, that your Copper be not too hot; for then the moisture of the ground is burned away, which will cause the ground to break in Etching. That done, let it be cold, then grind some white-lead, with Gum water; and mark, that so much Gum, as big as a cherry-stone, will serve for a piece of white-lead, as big as a Nutmeg or more; but you must remember to put as much water amongst it, as that the white may conveniently go out of your Pensil, and spread over the plate, then you must have a good big Pensil or Brush, as the Painters do use, the hair of which in compass may be about the bigness of a Walnut or more, especially for your great Plates, with that strike twice or thrice, cross over the Plate, till it lieth even, then you must have another Pensil or Brush bigger than the first, but smooth, made of Squirrels tails, with that you may smooth gently the white, which you could not do with the other Brush, and so let it dry.

Then take your design, after which you are to work; and scrape on the back side thereof some red chalk all over, and then take a soft small Coal or Charcoal and rub it over the red chalk, till both mingle together; then take some hard brush, or a great Pensil that is very stiff; and rub it till all be fine and even, and so lay the design upon your Copper; and with a blunt point of a needle draw the out strokes, and that done, take off your design, and so go to work: but if you would preserve the print, or drawing, you would Copy from being soyl'd on the backside; you may rub over a piece of Venice paper with red chalk, according to the former Directions, and so put your print on that; by which means your print will be kept clean.

You must have commonly three or four sorts of Needles, some bigger and some smaller, which must be put into a little stick of the thickness of a Pen, and on the other end a Pensil to sweep off the ground; that will rise up where you have wrought it away. To make the bluntest Needles, you must rub them on the backside of a Plate; the finest Needles you must whet gently on a fine Whetstone; till it be a very small point; but let it not be too sharp, but blunt it on a Table-book leaf, or some such thing. And always when you do leave your work; be sure not to let your Plate stand open; but wrap it up in a paper: For the air will in time corrupt the ground, and take out the moisture from it, which will be prejudicial in Etching, and subject to danger, especially in Winter time; when you commonly must keep a good fire, when you work, otherwise your ground will leap away.

When you are going to Etch, then take some green wax; and melt it in some little Pipkin, then with a Pensil cover all the four edges of the Copper; then take more of the Wax, and frame it into long flat pieces in a shape of a Ruler, but nothing so broad; put them along the edges, where you have done with your Pensil, then you must have a little piece of a Pensil-stick, or some such thing made sharp underneath the broad way, not point way; with the help of that, make your wax stick to the Copper, still stopping it as you go along round about it. If the work be fine, take Aqua Fortis of three pence the ounce, and put to it some Wine Vinegar, but take at least two parts of Wine Vinegar, to one part of Aqua Fortis: but if the work be coarse, requiring much deepness, then you may take of the Aqua Fortis alone: and such thing, as you would have faint, you must pour off the Aqua Fortis off the Plate, and put on in the Room of it, only fair water and so

let

let the Plate stand, till it be dry : which done melt some Candles Grease with a little of your ground ; and so stop such places with a Pensil dipt in that mixture, as you would have faint, then pour on your Aqua Fortis, again the same as was before, and do that so often as occasion will require : Then lay the Copper on the fire, till the ground shall melt and wipe it off with a rag, then rub the Plate with a little piece of a beaver hat dipt in oyl, and so your Plate is done.

How to make hard Varnish for Etching with Aqua Fortis.

TAKE five ounces of Greek pitch, or (for want of that) Burgundy pitch, five ounces of Rozin of Tire, or Calofomum, or for want of that ordinary Rozin, melt them together upon a gentle fire in a new earthen pot well Varnished, or leaded, and being very clean : These two things being first melted, and well mixt together, put into them four ounces of the best nut oyl ; mix them well together upon the same fire the space of a full half hour ; and let them boyl well ; then let this mixture cool a little upon a softer fire ; and afterwards touching it with the end of your finger, it will rope, (if it be boyl'd enough) like a glewy Syrrup. Then take the pot from the fire, and (the Varnish being a little more cooled) strain it thorow a fine linnen Cloath, or Taffata, into a well Varnished earthen pot ; or else put it into a thick glasse bottle, or any other thing, that will not drink it up, and stop it well, Varnish thus made will last twenty years and will be the better, the longer it is kept.

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